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# THE PROGRESS TO GEOGRAPHY

EDITED BY

RICHARD WILSON

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MYSELF AND MY COUNTRY

A STUDY IN CIVIC GEOGRAPHY



MACMILLAN AND CO., LIMITED  
ST MARTIN'S STREET, LONDON

1920

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## PREFACE

IN this little book I have tried to bring home to the mind of a young pupil two important facts—(1) that school geography is, or at all events ought to be, a subject which touches every-day life at all points; (2) that though we have an island home, we have Continental and world-wide connections which concern us at every moment of our lives.

In order to achieve this double purpose I have arranged the subject-matter in a rather novel manner, which will, I hope, rouse the pupil's living interest by making him feel that he is working out a problem to which he can contribute his own share of investigation and results.

This arrangement entails a good deal of repetition, but it is repetition of certain basic facts of humanistic geography, which must be driven home by continual insistence. If, for example, a pupil finds himself constantly encountering London in these chapters, he will obtain a better idea of the unique geographical importance of the great metropolis than he would from a single, crowded chapter, which attempts the impossible task of summing up a little of what London means to Britain, the Empire, and the World.

The teacher is strongly recommended to use several maps in considering with his pupils the subject-matter of this book. These should include maps of the British Isles, Europe, and the World. A map of the Atlantic and the countries bordering upon it will also be found



useful for the work. In this comparative map-study very young pupils can be made to take an absorbing interest, and the use of several charts at one and the same time quietly emphasises the fact that we cannot possibly study the geography of the Home Islands without continual reference to other parts of the globe.

I feel, after a long experience of teaching and of writing school books, that it is a mistake to deal separately with each of the component parts of the British Isles. They form together a geographical unit in every way, and when the scheme of work does not allow for a separate treatment of Scotland, Ireland, and Wales, as detailed as that which is usually given to England, it is surely better to regard the British Isles as one country, provided always that the very definite differences between the various parts are not overlooked.

This book is for junior pupils, and no attempt is made to cover the ground. The British Islands are dealt with more fully for older pupils in the last book of this series. The imperial aspect of the Mother Country is also considered in the fourth, and its European connections in the fifth book. I see no objection to telling pupils frankly that they are not at present expected to burden their memories with lists of names. The spirit of the work is one of inquiry, and its object rather to impart ideas than to make mention of everything. The proper companion to a volume of this kind is a small handbook for pupils' reference, containing attractively presented statistics which the pupil might be trained to use for himself, just as the adult uses an encyclopædia or gazetteer and good indexed atlas when the attention of the whole world is suddenly riveted upon some place which the geography teacher never thought of mentioning.



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## A RULE OF LIFE

KEEP ye the law—be swift in all obedience—  
Clear the land of evil, drive the road and bridge  
the ford.

Make ye sure to each his own  
That he reap where he hath sown ;  
By the peace among our peoples let men know  
we fear the Lord !

RUDYARD KIPLING.



IN A LONDON SQUARE.



# THE PROGRESS TO GEOGRAPHY

## STAGE III

### MYSELF AND MY COUNTRY

I FEEL inclined to begin this chapter by asking you the questions of the old nursery game :

“Are you a boy?”

“Are you a girl?”

“Are you in England?”

“Are you in Scotland?”

“Are you in Ireland?”

“Are you in Wales?”

Of course I cannot tell to which of these questions each of you has given the answer “Yes.” But whichever they may be, I shall be quite safe in saying that you are a Briton.



AN IRISH PEASANT GIRL.

And whether you were born in England, Scotland, Ireland or Wales, you can look at a map of the British Isles and say to yourself, "This is my country."

I know very well that a boy or girl in the



Isle of Man will be able to laugh at me; but I cannot make *everything* fit in.

Now we are going to learn in this book something about our country as it is to-day. And we are going to set about it in the following manner:

We are to consider in turn what things our native country has to offer to us. We shall take each of our chief needs in due order and see how the country in which we live supplies them.

In the first place we all need food. We shall therefore first consider how our country supplies us with this necessity by finding out where we get our bread and meat, and other kinds of food, including our water.

In the second place we all need clothing. We must therefore proceed to find out where our suits and boots and hats and dresses come from.

In the third place we all need shelter. So we must get some clear idea of the materials used in building our houses, and

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trace some of the more important substances to those parts of our country where they are to be found.

In the fourth place we need education. We must therefore learn something about our schools and colleges, and a little about the work they do.

In the fifth place we need an occupation. So we must find out what kind of employment is offered by our country to those who are willing to work; or, to put the matter in another way, we must find out something about our chief industries.

In the sixth place we need recreation. Every person is the better for an occasional holiday. We shall therefore consider what kind of holiday places there are to be found in our country.

In the seventh place we need government. So we shall find out a little about the way in which our laws are made and how they are put into force.

In the eighth place we need protection.





A HOLIDAY IN ST. JAMES'S PARK, LONDON.

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We shall therefore learn something about our Army, Navy, and Police, and the way in which they carry out their important duties.

Last of all we might have a little talk about the duty we owe to our country in return for all it has to offer us.

I think we shall enjoy this method of learning the geography of our native land. But before we begin to follow out my plan, let us take a general survey of a map of the British Isles, and then a glance at a map of Europe, and last of all, at a map of the World.

### A STUDY OF THE MAP

Look at a map which shows only the British Isles and the seas round about them. In the first place, find out, if it is marked, your own city or town. This is the most important part of the map to you, for the present at all events.



Now find London. This is really the most important city in the world to every Briton, as you will begin to see before we have read many chapters of this book; for we must constantly refer to it.

Consider next how the four parts of the British Isles are separated from each other. Ireland forms a separate country entirely cut off by the sea. Scotland and England are separated for the most part by a range of lonely hills known as the Cheviots. But there is no striking boundary between Wales and England.

Now point again to your own home on the map, and if it is inland, find out the nearest way to the sea; that is, point out the town or towns which your railway station advertises as the best places for you to visit in order to take a seaside holiday.

You ought to be able to say *which* sea it is that you bathe in when you go there. It may be the North Sea, the English Channel, the Irish Sea, or the Atlantic Ocean.

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Perhaps your father does not care for the seaside, but likes the mountains and the lakes when the holiday comes round? Then you must look out for the mountain lands on your map. They are shown very prettily on what is called a "physical map," on which the high lands are coloured brown and the flat parts green. I hope you have such a map on the school wall or in your atlas.

Generally speaking, you will find the high lands in the north of Scotland, in the north-west of England, in Wales, and right round about Ireland in the form of a ring.

Already, we seem to have made the acquaintance of our country. Let us go a step further in our general survey.

You know that the fine wavy lines shown on the map are the rivers. There are a large number in our country, but of course you will be most keenly interested in the river near your own home. There are few schools which have not a river beside them; and if it is only a small stream it will most likely





WAVERLEY STATION IN EDINBURGH THE CAPITAL OF SCOTLAND

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join a river large enough to be shown on the map.

The map will show you in which direction your particular river flows, and which sea it falls into. It will also show you whether it has a long mouth of the kind which is known as an estuary.

We shall come back to the lakes and mountains and rivers again and again ; but you have learnt a little about them, so far.

Now let us think for a little while about the towns.

If some one showed you a physical map of our country, which gives you the position of the high lands and low lands only, do you think you could give some general idea where most of the towns would be found? Would the position of the mountains be any guide to the position of the towns?

I think it would. The big town is usually found near a river flowing through a flat plain, or near to the sea, for reasons which I must leave you to think out for yourselves.



You will find the towns, therefore, in the flat lands, and near the mouths of the rivers. And before we have gone very far in these chapters, you will also find that the towns are arranged in groups for a very interesting reason.

The best way to get some idea of the size of our country is to use a London railway guide. This may seem to be a very strange method, but I think you will soon agree that it is a very good one.

If I say that it is about six hundred miles from the south of England to the north of Scotland, you say, "Is it really?" and pass on to something more striking. But if I find from my railway guide that it takes just eight hours to travel in an express train from London, the capital of England and of the Empire, to Edinburgh, the capital of Scotland, that is much more interesting. It means that if we start from London at ten o'clock in the morning we can reach Edinburgh in the early evening.

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Now suppose that I wish to go from London, westward, to Plymouth by another fast train. On looking at the guide I find that the journey will take a little over four hours.

If I were going to Ireland I should first go by train from London to Holyhead in the north-west of Wales. This journey would take about five hours and a half; and if I crossed the Irish Sea to Dublin, the capital of Ireland, it would take as a rule about three and a half hours more.

One of the lines from London to Edinburgh passes through York and Newcastle. It takes the express four hours to reach York, and about two hours more to travel to Newcastle.

We might go to Edinburgh by another route, which runs north-west through the railway town of Crewe to Carlisle, on the border of Scotland. I find that it takes a little more than three hours to get to Crewe, and about three hours more to get to Carlisle.





March 25th 1863

CARLISLE FROM THE CASTLE RAMPARTS.

From Carlisle we might go on to the great Scottish city of Glasgow, a journey of about two hours and a quarter. Or we might go back to London from Carlisle by another line which passes through the big Yorkshire city of Leeds. From Leeds to London is a "distance" of about four hours.

The great Lancashire cities of Manchester and Liverpool are each about four hours distant from London, while you can get to the big Midland city of Birmingham in three

## 24 The Progress to Geography

hours, or to Sheffield in three and a half. Of course these journeys are all by fast expresses. You will notice how often I have started from London, which has a ring of big railway stations round about it.

You see, then, that our country is not very big. If you look at it on a map of Europe, you will see that it is much less than France or Germany or Russia. And if you look at it on a map of the World, you will find that it is quite small beside Canada or Australia. And yet Canada and Australia look upon Britain as their Mother Country!



## FIRST SECTION—FOOD

## I. OUR WHEAT FARMS

BREAD has been fitly called “the staff of life,” and we must try to find out, in the first place, how far our own country is able to provide us with this all-important article of food.

We eat white bread and brown bread, but both of these are made from wheat. It will be our business to find out where this kind of corn is grown, and whether we grow plenty of it to keep our bakers supplied with flour and whole-meal.

There are two important things to remember about wheat. It thrives best on a heavy clay soil, and it needs a rather dry climate which is not very cold. Experiments have proved that it can be grown in countries which were once thought too cold for it, but the quality of this wheat is not very high.

Now the best parts of our country for growing wheat are the east of England and





A STREET IN LINCOLN, THE CATHEDRAL TOWN OF THE EAST COUNTRY.

the south-east of Scotland. You will find the English wheat farms round about the broad opening in the east coast known as the Wash; and you will find the Scottish wheat farms to the south of the long opening in the east coast called the Firth of Forth.

These are some of the driest parts of our country, for much more rain falls in the west than in the east. You remember the old rhyme :

The West wind always brings us rain,  
The East wind blows it back again.

The east wind is dry and cold ; the west wind is warm and soft and moist.

Now you must not form the wrong idea that these two districts are the only places where wheat is grown in our country. You will often find a field of wheat far away from the east coast districts, in places where the farmer engages in what is known as "mixed farming." But the best wheat and the largest quantity comes from these east coast districts.

You will readily believe that it takes a great deal of wheat to be made into the flour required for all our bread and cakes and puddings. And you will expect to find the farmers very busy with the growing of wheat,

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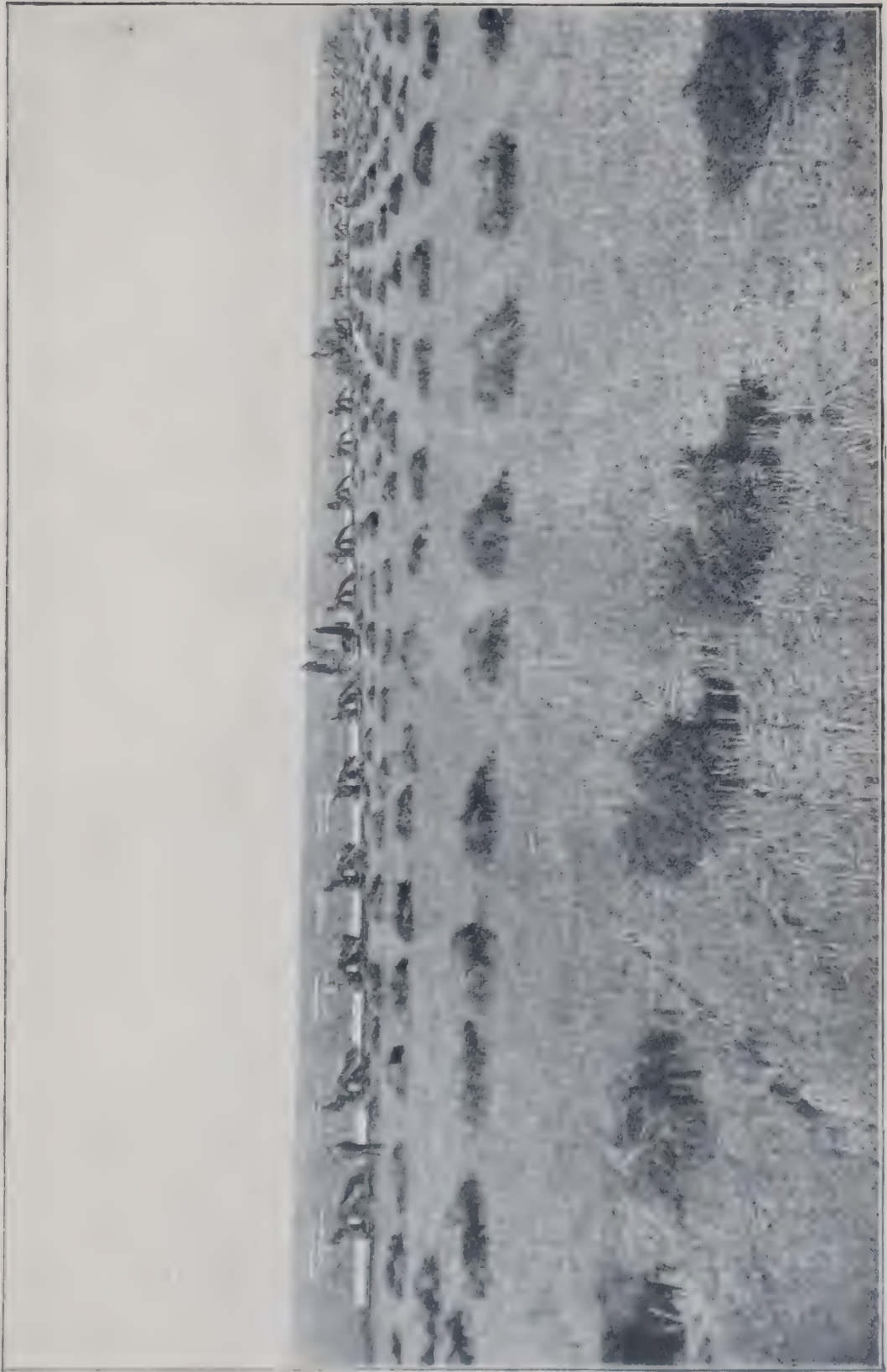
using all the land they can spare for this important purpose.

This, however, is not the case. If we depended upon the wheat grown at home we should only have sufficient to last us for a very small part of the year. The rest of our grain and flour is brought to us from far across the sea.

In the United States, in Canada, in India, in Russia, and in Australia, there are wheat fields beside which our own are very small indeed. And from the first three of these great countries comes by far the greater part of our wheat and flour.

Now, although our own country cannot feed us if left to herself, you must not think that she gets all this foreign wheat and flour for nothing. She pays for it with things that the countries which send it to her have not got, as we shall see in later chapters of this book; so we can truly say that our native land provides us with flour for our bread and cakes and puddings after all.





## 30 The Progress to Geography

Our farms are small, but they are very good, and the British farmer knows his business; indeed he has taught the farmers of many other countries how to do their work.

Of course the grain and flour which come to us has to be brought in great ships across the sea. What would happen to us in time of war if we had not a strong Navy?



AN ENGLISH FARM-HOUSE IN THE WEST COUNTRY.

## 2. OUR CATTLE FARMS

After bread, I think that milk comes next in importance as a food. You can, I feel sure, easily guess the reason why milk cannot be brought to us across the seas. Here, at least, is one kind of food which we must supply for ourselves.

There are dairy farms near all our large towns. I can see one from my window as I write these words, and my home is only about five miles from the heart of London. A few years ago there was a cow tethered to the railing in the Mall, down which the King goes to Buckingham Palace ; and here you could get a glass of milk "fresh from the cow."

But although this useful animal is kept wherever there is grass to feed it, there are also special "cow counties" in certain parts of our country. And the farmers of these counties are very proud of their cattle, which are famous all over the world



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If a farmer wishes to have fat cattle, he must have good pastures on which to feed them. You cannot have good grass without a plentiful supply of rain; so that, as a general rule, we must look to the more rainy parts of our country for the best dairy farms.

You may be surprised to learn that the mountains have a great deal to do with the rain supply, and therefore with the milk supply, of our country. It comes about in this way.

You already know that the winds which bring the rain to us are those which blow from the west and the south-west. They come to us from across the great Atlantic Ocean filled with water-vapour, which is only rain ready to fall as soon as it has been cooled.

The clouds borne along by these winds strike against the western sides of the mountain ranges and are thereby cooled, so that the water-vapour falls to the earth as rain. We find, then, that a great deal of



THE MOUNTAINS OF THE ENGLISH LAKE DISTRICT.

rain falls in Ireland, which is the first part of our country to be reached by these wet winds; and we also find that Ireland is one of the best parts of the British Islands for rich pastures and good cattle farms.

The best dairy farms of England and Scotland, too, are in the western parts of these two countries. A visit to the provision shop will remind you of this. There you will see Cheddar cheese, which comes from Somerset, as well as Gloucester cheese



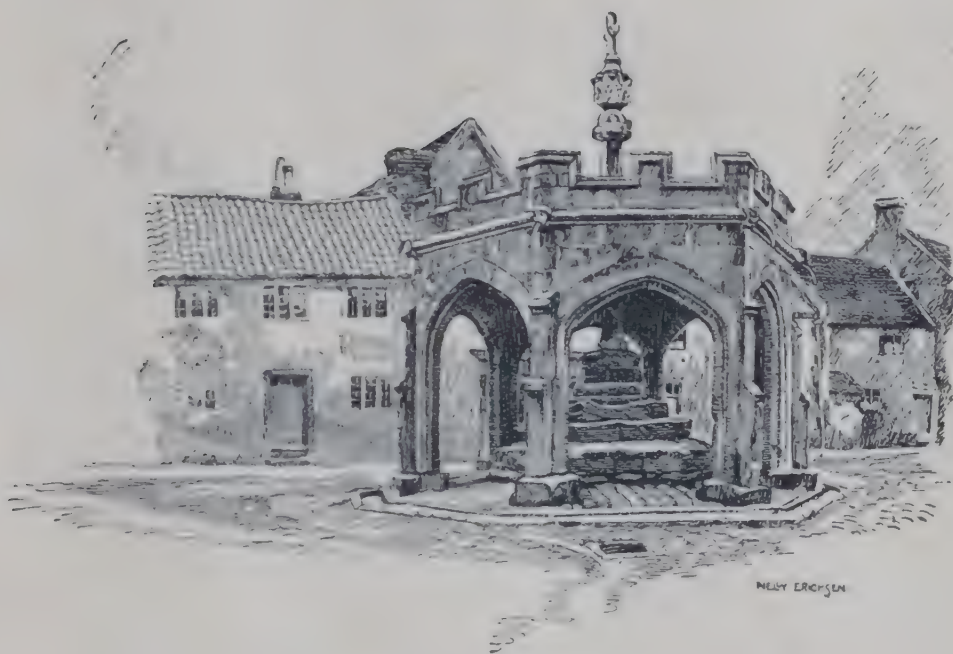
IN WENSLEYDALE.

and Cheshire cheese. You may also see Wensleydale cheese, which comes from the western part of the county of York.

Every one has heard, too, of the clotted cream of Devonshire and of Cornwall, and some of you may have tasted one or both of these delicacies. A few of you may even know the exact difference between them.

You see, I have passed from milk to cream and cheese, but you will agree that this is a natural step to take. No dairy farmer makes his living from milk alone. He has his separators to get the cream quickly, in order





MARKET CROSS, CHEDDAR.

to make it into butter in a churn. And he often uses some of the cream to make cheese.

But although our dairy farmers and cow-keepers give us all the milk we need, there are not plenty of them to give us a good supply of cheap butter and cheese. A great quantity of both these useful foods is usually brought to us from across the seas.

In ordinary times you could find Dutch, American, and Canadian cheese in many of our shops, and every boy and girl who has gone errands for mother has heard of Danish

## 36 The Progress to Geography

butter. As a rule, you will find that the foreign butter and cheese is cheaper than that made at home; but your mother will know more about this than I do, and I feel sure that she will be glad to help you in your geography by telling you all she knows about these things.

Perhaps she will tell you, too, what is meant by Canadian Cheddar—that is, if you cannot guess for yourselves.

### 3. OUR MEAT SUPPLY

We shall not grow up very strong if we feed only on bread and milk, with a little butter and cheese. The fat cattle of which the British farmer is so proud must provide us with beefsteaks as well.

We must have mutton, too, and it takes a large number of sheep to feed our hungry people. These useful animals are to be found in all parts of the country, for they are not quite so particular in their feeding as the fat cattle of the dairy farms.





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The best and the fattest sheep feed in the rich pastures of the plains, but other kinds can get quite a good living up the hill-sides and even in the mountain lands.

Some of the finest of our sheep feed on the rolling downs of the south of England. Here the soil is chalky, and the grass which grows upon it makes very good feeding for sheep. Scotland, too, is a land of the shepherd; and great flocks of sheep wander about on the grassy slopes of the Cheviot Hills as well as in the still higher districts farther to the north.

But many people would get very little beef and mutton if we depended entirely upon the cattle and sheep of our own country. Here again you must ask your mother for help in your geography. She will tell you what a high price must be paid for the best Scotch or English beef and mutton.

These prices are really so high that many people cannot hope to pay them, and they must look elsewhere for their meat.



NEAR CANTERBURY, ENGLAND.

You may, perhaps, have seen this notice in a shop window, "Fine Canterbury Lamb." Now there is a Canterbury in our own country, down in the garden county of Kent, and I know that in the right season you can get very fine lamb round about that old cathedral city, for I have often eaten it. But this is not the Canterbury of the meat-salesman's notice.

The Canterbury he is thinking about is far away across the sea, on the other side of the world. It is in the island country of

## 40 The Progress to Geography

New Zealand, which is part of the great British Empire, and which has very fine wide pastures for feeding sheep. In order that the mutton may be kept fresh on its voyage to us of about six weeks, it is "chilled" before being put into ice-cold chambers on a fast steamer.

And although it has been carried so far across the sea, it can be sold more cheaply in our shops than the mutton from our own sheep.

Australia is another "meat safe" for the Mother Country. Here, also, there are wide pastures on which millions of sheep are fed. These animals were first kept for their wool, and there was so much mutton that much of it was wasted, or boiled down to make tallow! Then a clever man found out how to "chill" meat so that it would keep fresh for a long time, and the great trade in Australian mutton began.

Look at a map of the globe and find out South America. In the southern part of this



continent. You will find a country called Argentina. Now trace with your finger the sea journey across the Atlantic to our own country. This is the route followed by a large number of ships, which bring a great deal of meat to our ports.

In Argentina there are broad grassy plains, on which great herds of cattle are fed. They roam about over these wide pastures and are almost wild—not at all like the quiet cattle of our own fields and pastures. But they make very good meat for British tables.

Now, what about our rashers for breakfast? We have pigs in our own land, as you know very well; and they are not very particular as to the kind of food they eat, though it is a libel on the pig to say that he *likes* dirt. He likes his sty kept clean, just as you like your bedroom kept clean; and though he will eat refuse he will make better bacon if he is fed on proper food.

Ask mother again which bacon is the most expensive. I expect that she will tell

## 42 The Progress to Geography

you that the English bacon from Wiltshire is very dear, and that the Cumberland bacon and the Yorkshire hams are really too expensive to feed hungry boys and girls.

There is such a thing as "best Irish roll," which I am told is not quite so expensive. And this makes us think of the great trade in bacon which Ireland does with England and Scotland. They say that the Irish cottager has such a great deal of respect for the pig that he treats him like a gentleman, and even lets him sleep in his own cottage!

But I think that this is only a story.

There is, however, a great deal of bacon in the shops which is not British. Some of it comes from the other side of the North Sea, and this Danish bacon is of good quality and not very expensive.

I hope that by this time I have started you on a plan of learning *some* of your geography in the shops to which you are sent when mother needs your help.



HARVESTING IN IRELAND.



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### 4. OUR TEA, COFFEE, AND COCOA

Ask the good people at home what they would do if there were no tea to be had. I think that there would be some very long faces between four and five o'clock in the afternoon, and perhaps also at breakfast-time.

We drink very much more tea than we drink coffee or cocoa. In our large towns we find tea-shops wherever we turn ; and in London the number of these places seems to be without end. Where does all this tea come from ?

Not one pound of it is grown in our own country. Tea will only grow in a hot land, and, as you know, hot countries lie on or near the Equator.

The first tea which came to this country was brought from China, and this great land in the Far East still sends us about one-third of our tea. But the rest comes from India, which is part of the British Empire.

We get as much tea in a year from these



BLACK GIRLS PICKING TEA.

two countries as would supply every man, woman, and child with six pounds each. If you do not drink *your* six pounds then some one else must drink more.

You may say that this has not much to do with the geography of our own country, but I rather think it has. In the first place, although our own country does not supply us with our tea by growing it for us, it must pay for it in some way; and our tea bill is

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a very heavy one. We shall see in a later chapter how Britain pays for her tea.

Further, if we could follow the tea from the chests to the millions of tea-pots in which it is brewed we should learn a great deal of the geography of our own country. The tea-ships come up the English Channel and unload their cargoes at the London docks on the busy River Thames.

Here the tea is stored in great warehouses, and it is sold in London to the tea merchants. Then its railway journeys begin from the great London stations. Off it goes to all the big cities, to the towns and villages, and even to the lonely cottages among the mountains of Scotland and Wales and the English Lake District.

It crosses the sea to Ireland too, and there I am told you will often find it on the cottage hearth where it has stewed for hours.

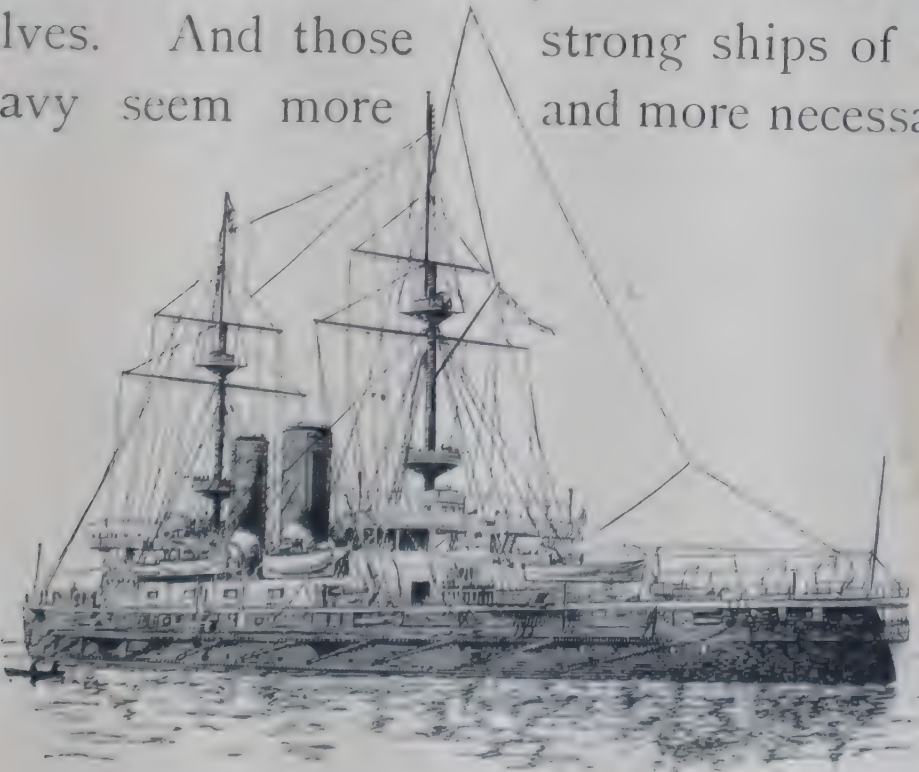
Coffee is not such a favourite drink as tea. But we use a great deal of it in a year, and we have to buy it all from abroad. Most of it



comes from the great land of Brazil in South America, and this is brought to the busy port of Liverpool on our west coast. It comes in the form of small green beans which must be roasted before they are ground.

We use a great deal of cocoa, too, and this must come from hot lands like Brazil. A great deal is brought to our western port of Bristol, where much of it is used for making chocolate.

Our bill for useful things is mounting up, is it not? We certainly do not feed ourselves. And those strong ships of our Navy seem more and more necessary.



## 5. OUR SUGAR SUPPLY

Tea, coffee, and cocoa are not very nice without sugar. We cannot make toffee without sugar, nor any of the sweetmeats which you are so fond of buying. And you might ask your mother how she would get on with her cooking if she had no sugar.

Here again is another very useful thing which we cannot grow for ourselves; for the best sugar is got from the sugar-cane, which will only grow in very hot countries. We get most of our best sugar from India and from the islands known as the West Indies, which lie in the Atlantic Ocean.

This sugar is got from the cane by pressing it between rollers and squeezing out the juice. The juice is boiled and the sugar forms in crystals. Treacle is also made during this process.

Have you ever tasted boiled beetroot? If you have, you will know that it is very sweet, and this sweetness is due to the sugar in it.

There is another kind of beetroot which has even more sugar in it than the red beetroot which we use as a vegetable.

Some time ago, a clever man found out how to get the sugar from this root ; and at once the people of Russia and France and Germany and Holland began to sow great tracts of land with the sugar-beet. The root might have been sown in our country too, for it does not need a hot climate to make it grow. But this was not done.

We had plenty of cane-sugar coming from parts of our own Empire across the sea ; and beet-sugar soon began to come to us from France and Germany and Russia at a cheap rate. So we did not grow the sugar-beet.

When war broke out with Germany, there were people who wished that we *had* begun to grow the sugar-beet. For in war-time, as you know, it is not so easy to get things from abroad, unless our Navy is very strong indeed.

As soon as we begin to study our food supply, we get into touch with our Navy.



## 6. OUR VEGETABLES AND FRUIT

It is said that the brave sailor, Sir John Hawkins, was the first to bring the potato to England, having found it in use as a food among the Red Men of America. This was in the time of Queen Elizabeth; but we do not read that people at once began to make use of the potato.

Sir Walter Raleigh went over to Ireland, where he had estates, and began potato growing; and after a time the root was largely grown in that country, and it is still the chief vegetable of the Irish people.

But for a long time the English and Scottish people thought it was only fit food for pigs, until some one brought a bag of seed potatoes from Ireland to Lancashire; and the people of that county liked them so well that they began to grow them very largely.

As time went on the root was grown in all parts of the country; and now the potato is

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GOING TO MARKET ON AN IRISH JAUNTING CAR

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one of the vegetables which we feel that we could not possibly do without.

Almost any good, well-drained garden soil is good for the potato, and we find potato fields in all parts of the country ; but some of the best potatoes come from the south-west of Scotland, where there are very large tracts of land bearing this root.

The potato is one of the food-stuffs which we can grow for ourselves, though we get some from the other side of the North Sea as well.

All round London and most of our big towns there is a ring of market gardens which grow such vegetables as cabbages, turnips, beetroot, parsnips, and onions. And one of the "sights of London" is the long string of market carts making their way into the capital in the early hours of the morning.

These carts come from the gardens of Kent and Surrey and Essex and Sussex and Middlesex. They are very heavily laden, for it takes a great quantity of vegetables to supply the tables of about six million people.





IN A KENTISH HOP GARDEN.

The great vegetable and fruit market is known as Covent Garden; and it is a very busy place long before London people have got out of bed.

Anyone who has a garden will tell you that it is best to grow apples and pears on a sunny wall in order to ripen the fruit. And you will not be surprised to learn that our best apples, pears, cherries, and plums are grown in the south and west of England, where the weather is, on the

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whole, warmer and sunnier than in the east and the north.

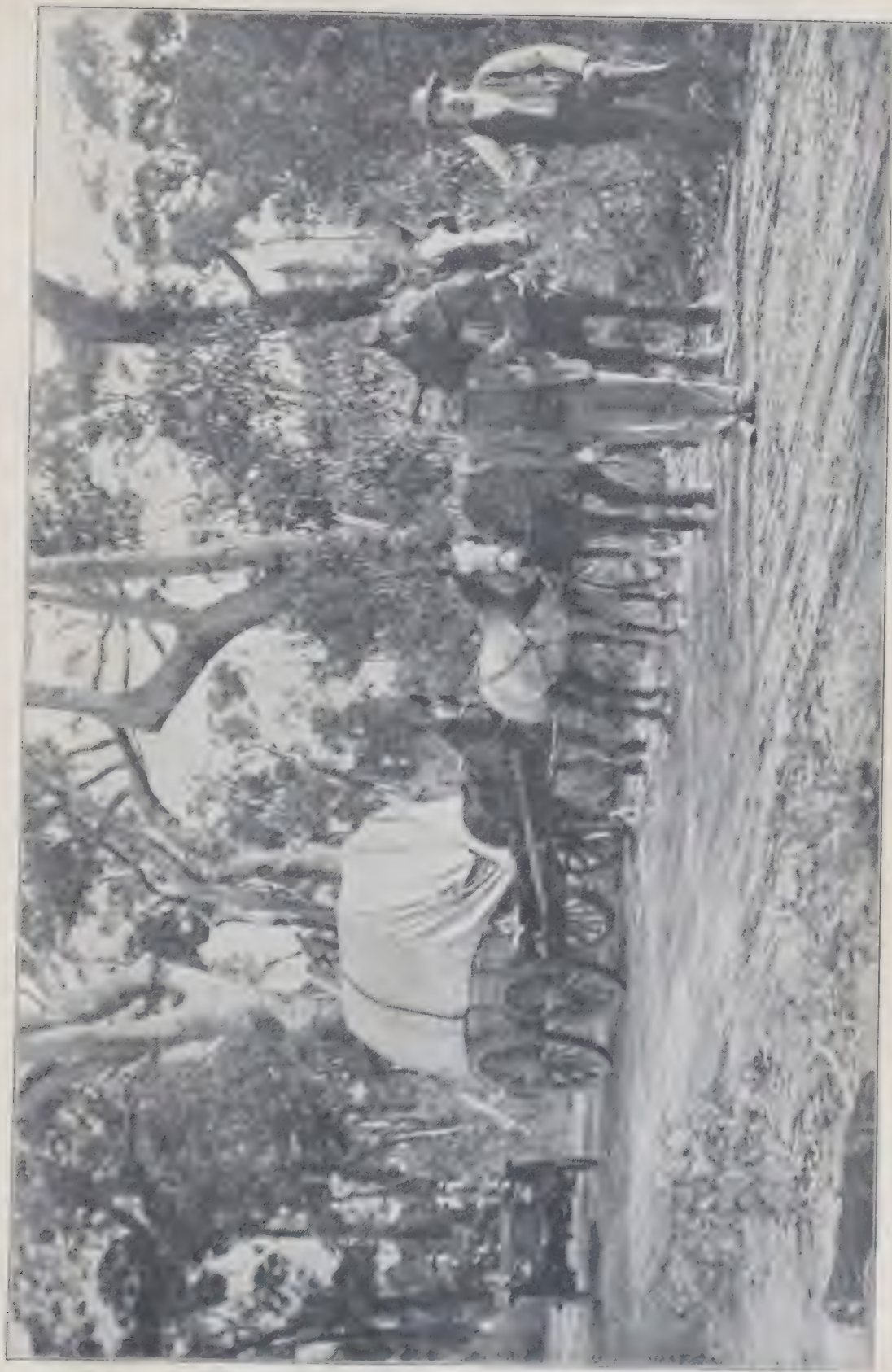
There are many fruit gardens in all parts of the country, but the chief counties for orchards are Kent, in the south-east corner of England, and Hereford and Worcester in the west.

Now our fruit ripens in the autumn, and, after having been kept for a while, is at its best when the Christmas parties are coming on. But during the last few years I have noticed very fine apples and pears in our shops during the spring and early summer.

This fruit has not come from our home orchards and gardens. It comes from the other side of the world, where the seasons are the opposite to ours; for Australia and New Zealand are now sending fruit to us in fast steamers which take about six weeks to reach our shores.

Besides, I saw to-day in London a fine show of apples which had come across the ocean from Canada. This great country is









THE SOUTH-EASTERN CORNER OF ENGLAND.

on the same side of the Equator as our own land, as a glance at the globe will show you ; and if she is going to keep on sending us fine fruit in time for the Christmas parties, they ought to be jollier than ever.

We can no more grow the banana than we can grow the tea plant. For this fruit needs a hot climate such as that of the West Indies, where most of the bananas sold so cheaply in our shops are grown. They come in special ships across the Atlantic Ocean to the great port of Bristol. From here they are sent by rail to all parts of our country.

Now I have not space to tell you of all the fruits in our shops, but perhaps I have told you enough to start you asking questions about such things as sweet oranges and oranges for marmalade, and a few other fruits. The fruit-seller may know some of these things, and will tell you what he can if you ask him politely.

Then you can set yourselves guessing stories like this: "If we went to war with

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Spain, what should we have to go without? If we could not reach Brazil, what should we miss from our fruit shops?"

### 7. OUR FISH SUPPLY

Not very long ago fish was very scarce in the inland places, and only rich people could buy it. But now that we have so many fast trains it is easily carried from the places where it is landed on the coast; and good sea fish is, on the whole, cheap and plentiful in the inland towns.

It is not only the steam locomotive but the steam fishing-boat or trawler which has made fish such a plentiful food. For these fast-going vessels cannot only go farther away than the fisherman's sailing coble, they can come back to port much more quickly also. So you see that the fisherman, like the landsman, owes a great deal to steam.

Where do these boats go to do their fishing? Well, it depends partly on the place



from which they start and to which they carry back their cargoes.

Look down the east coast of England on the map and find out the following towns: Hull, Grimsby, Yarmouth, Lowestoft, and Ramsgate. The boats from these places go out in the winter season to a part of the North Sea known as the Dogger Bank, where there is a great deal of fish to be had. But in summer they go farther away to the seas near the coasts of Denmark, Germany, and Hoiland.

You may be surprised to learn that British boats go so far from their own country. But I ought to tell you that they have a right to fish in any open sea, so long as they are more than three miles from a foreign coast. And although the Dogger Bank is not far from our own coast, we have no right to prevent foreign boats from fishing there.

The fishing-boats which do their work off the east coast of Scotland put into Leith on the Firth of Forth, or Aberdeen or Peter-

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head farther to the north. For a long time Dundee has been famous for its stout ships which sail away to the cold northern seas to catch the huge sea monster known as the whale. Of course this kind of fishing has nothing to do with our food supply; but whale oil and whale-bone are very useful things.

There are a number of fishing villages round the rocky shores of the peninsula of Cornwall and Devon, and many of the trawlers which fish in these waters put into Plymouth and Brixham on the English Channel. Trawlers from the east coast are sometimes found on these fishing grounds during the summer. They carry a good supply of ice to keep the fish fresh while it is being carried to the coast towns, from which some of it will be taken by fast "fish trains" to an inland market.

Of course the greatest market of all is that in London. It is known as Billingsgate Market, and is one of the busiest places in the great city. You must not forget that



FISHING-BOATS COMING INTO LOWESTOFT.

there are in London about as many people as there are in the whole of Scotland ; and it takes a great deal of fish to keep all these people supplied.

There is a large and busy fish market in Liverpool also, as well as one at Glasgow, and another at Dublin ; and most of the trawlers which put into these three ports have done their work in the seas between Great Britain and Ireland.

What kind of fish is taken by all these boats ? You may find the answer to this



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question by making some enquiries at home and at the fishmonger's shop.

A list drawn up by yourself will be much more valuable and interesting than one supplied to you ready-made in this book. But there is one kind of fish, of great value as a food, about which I should like to give you some information.

It is known as the herring, and is taken for the most part in the North Sea. This fish is caught during the summer and autumn in long nets fastened end to end, sometimes to the length of over a mile. It is not an uncommon thing for more than a million herring to be landed at Yarmouth and Lowestoft in one day.

Of course a large part of the "catch" is sent off post-haste to Billingsgate and to the fish markets of the big inland towns, whose names are printed in large type on your map. But there are still many more herrings left than have been ordered by the fishmongers of these towns.

What is to be done with them? There have been times when the catch was so great that the fish were put on the land to serve as manure; but this is not the usual way of dealing with what is left.

They are either salted, when they become bloaters, or smoked, when they become kippers; and, of course, salted or smoked herrings will keep for quite a long time.



## 8. OUR WATER SUPPLY

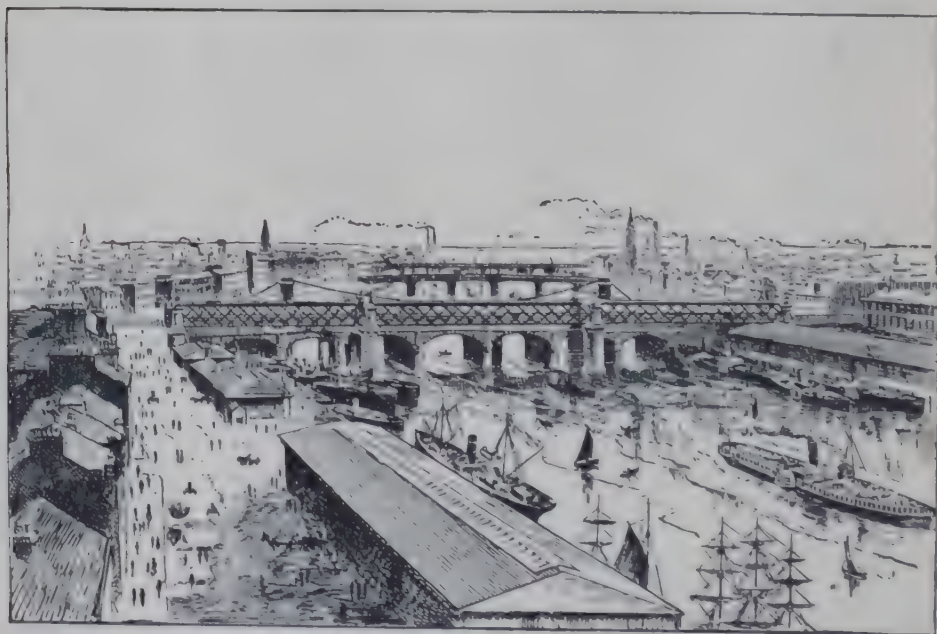
The water supply to our houses and towns ought to set you thinking very profitably on matters of geography. Those boys and girls who do not know where the water comes from which they use every day are very poor citizens indeed.

In the west of Scotland there is a very well-known lake called Loch Katrine. It

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lies nestling among the mountains, and forms one of the most beautiful sheets of water in the whole of the wide world.

But to me the greatest beauty of Loch Katrine is the fact that it supplies the city of



Glasgow, thirty-four miles away, with plenty of excellent water for its citizens; and the water is taken away in pipes without spoiling the beauty of the shores of the lake. The power of the rushing water is also used to make electricity to drive many of the machines in the factories of Glasgow.

This lake, you see, forms a ready-made



water-store or reservoir for a great city. Of course it is always being filled up by the numerous streams which flow into it; and it is connected by a tunnel with another lake, which helps to keep up the supply; for Glasgow is a huge city and needs a great deal of water.

One day I drove round a big English lake which lies in what is known as the Lake District. Its name is Thirlmere, and it is near the foot of a great mountain called Helvellyn. Its shores are bare of woods, but the scenery is very grand and impressive.

Now one of the grandest things about Thirlmere is the fact that it supplies splendid water to the people of the busy city of Manchester, which is nearly a hundred miles away. Thirlmere, too, is a natural reservoir, fed by the streams of "the mighty Helvellyn."

Every large city is not so fortunate as to have a natural reservoir of this kind, so it must make one, as Liverpool and Birmingham have done. Each of these two cities has gone to Wales for its supply of water.

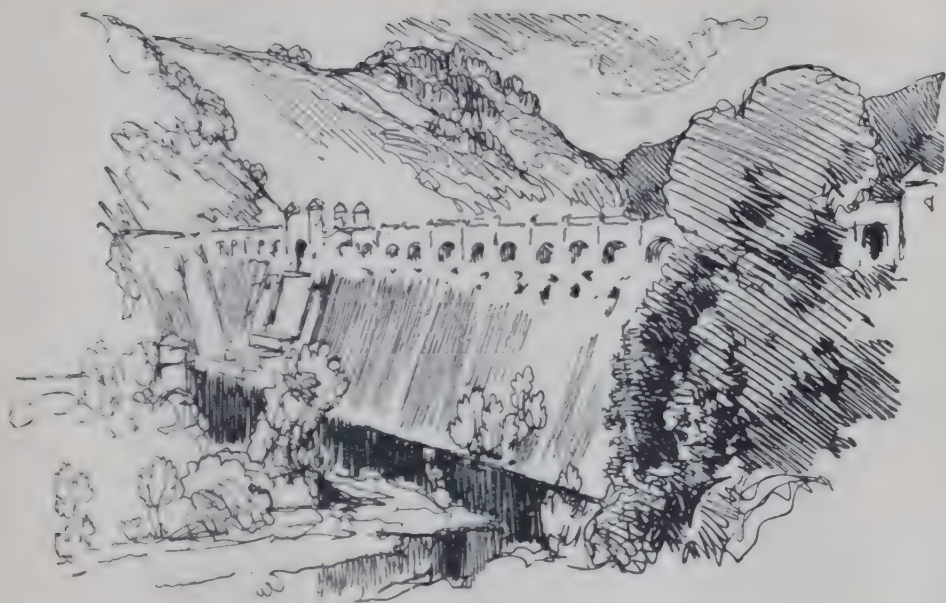
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Trace out on the map the River Wye which flows into the mouth of the Severn. In the upper valley of this river there is a big reservoir into which flow the streams from all the hills round about. The water has been collected into a big lake with high stone walls round about it, and it is taken in pipes over a distance of seventy-three miles to Birmingham.

Not very far away there is a stream called the Vyrnwy, which also flows into the Severn. In the valley of this river a great reservoir has been made, from which water is taken all the way to Liverpool.

Some day, it is said, there will be another large reservoir made in the Wye valley to supply water to London. At present the great city has a ring of reservoirs all round about it, and some of its water comes from deep chalk wells down in Kent.

Sheffield gets some of its water from a reservoir in the valley of the Derwent, about twelve miles from the city. Here, also, there are great stone walls called dams, which keep



THE GREAT DAM AT LAKE VYRNWY.

the water in one place, and before entering the pipes it is passed through beds of sand and gravel. This is done to filter it and make it pure for drinking purposes.

You will notice that several of the big cities have gone westward for their water supply; and you know already that the western parts of our islands have more rain than the eastern, as well as deep valleys between the mountains in which the water can be stored.

I hope I have told you enough to set you



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wondering and asking questions about the water which comes to your own house; and perhaps, some day, you will be able to pay a visit to some water-works and find out how water is filtered.

### SECOND SECTION—CLOTHING

#### I. OUR WOOL SUPPLY

THERE was once a time, now hundreds of years ago, when England not only supplied all the wool that was wanted in the country for making clothing, but also sent wool to other countries. We must not forget, however, that at that time there were not many people in the country, compared with the present number.

In our own time we still grow a great deal of the wool we require, and it is very good wool indeed; but we have not nearly enough, and most of the fleeces we need must be brought to us from far across the sea.



VILLAGE STREET, CASTLE, AND YARN MARKET AT DUNSTER IN SOMERSET.

We have already agreed that if we cannot supply a certain useful thing ourselves, the next best thing is to get it from some British

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land across the ocean; and in the case of wool this is what is done.

Most of our wool now comes to us from Australia, New Zealand, and South Africa, which are all British countries and parts of the great British Empire. These lands on the other side of the world have fine wide pastures and millions of sheep of the best kind. The wool ships come mostly to the port of London, and there they are met by the merchants who buy the wool for the factories in Yorkshire and other parts of the country.

A great deal of wool from South America is brought into the busy port of Liverpool, on the Mersey. And when the wool has been turned into cloth and clothing, some of it passes out of the country again through Liverpool, some goes out through London, and some through Hull. So you see that though we have to get a great deal of our wool from abroad, we use the cloth and clothing made from it to help to pay for



our tea, sugar, fruit, and other things which we cannot supply ourselves.

Most of the wool, as I have said, is taken to the mills of West Yorkshire to be made into yarn or woven into cloth. At one time the broad shire of York was a great sheep-rearing county, and the wool-spinning and weaving was carried on where the wool was produced, as you might expect.

At first the spinning and weaving were done in the cottages by hand; then machines and steam engines were invented; but most of the spinners and weavers still stayed on in Yorkshire, for that county had plenty of coal to drive the new machines.

Mills were set up in many parts, and great towns grew rapidly, such as Leeds, Bradford, Wakefield, Huddersfield, and Halifax. Leeds is the largest of the wool towns, and makes a great deal of ready-made clothing.

Bradford makes more mohair than any other place in the world. Mohair is very fine cloth made from the hair of the Angora

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goat, which came first from Western Asia, but is now largely reared in South Africa. Halifax is famous for its carpets. Huddersfield makes fine woollen cloth of all kinds.

In the south of Scotland and on the Cheviot Hills large flocks of sheep are fed, and we find several busy woollen towns in the valley of the Tweed making "tweeds"<sup>1</sup> in some of the most up-to-date mills in the world. The two most important of these towns are Hawick and Galashiels.

The weaver of woollen cloth also carries on his trade in the Highlands of Scotland, as well as in the islands known as the Hebrides, off the western coast. The rough "Harris" tweeds which you may have seen in the shops (your mother will know of them if you do not) come from a Scottish island of this name.

<sup>1</sup> The name "tweed" helps us to remember the name of the river in the district where the cloth is made, but it is said that there is no real connection between the two words. Some "twilled" cloth was once sent from a mill to a customer, with a bill on which it was referred to as "tweels"; and from this word the name "tweeds" was made. So, at least, runs the story.



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You may also have seen Donegal tweeds in the outfitter's shop. These come, or ought to have come, from the north-western corner of Ireland. A great deal of cloth is also made in the west of England. The mills of many small towns not far from the Cotswold Hills were very busy making khaki cloth soon after the beginning of the war with Germany in 1914.

You see, then, that the making of woollen cloth is one of the things in which we excel, and for which the mills of Britain are famous all over the world. Every one has a great respect for British "broadcloth."

### 2. OUR COTTON SUPPLY

Many hundreds of years ago an English traveller found himself in a hot country far away across the sea. There he saw a great

her. This was a piece of cotton-down, <sup>1</sup> Th  
in the dy white and fleecy.

real co  
once he had often seen fine wool from the back  
of the sheep in his own country, but when

he heard that *this* downy fleece was got from a tree, he found it very hard to believe the story.

The man who was showing the wool to the traveller must have had a great deal of fun in him : for he at once told him that the cotton-tree bore a large pod from which came out a tiny lamb, and that the cotton "wool" was really the fleece of this little lamb !

The traveller not only believed this story but wrote it down in a book when he got home to England again. Perhaps it will serve to explain why people have got into a habit of speaking of "cotton wool," which, when you come to think carefully of the two words together, must strike you as very strange.

We do not grow cotton in this country for the same reason that we do not grow tea or cane-sugar or bananas. We must go abroad for all our cotton. Not the least little bit of it is got from the pretty lambs of the spring-time which we can see in the fields

"Skipping by their fleecy dams."

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We get cotton from countries across the sea in very large quantities—twice as much as wool, so far as value is concerned. We take each year about one sovereign's worth for every man, woman, and child in our country ; but although we use such a lot of it for ourselves, we send out made-up cotton goods to the value of about twenty-six shillings per head.

This will give you a little idea of the work done by the busy cotton towns of Lancashire, for that is where most of our cotton mills are to be found.

Seeing that we cannot grow cotton in our own country, the next best thing would be to grow it in one of the hotter parts of the British Empire. Good cotton is a very delicate plant which will not grow without a great deal of careful cultivation ; but it is not enough that a country should simply have a hot climate. And so far we do not find that a great deal of our "raw" cotton comes to us from other parts of the British Empire. We



get a great deal from India, however, and some from Egypt ; but if we trusted to these two countries alone, the cotton goods in our shops would be so expensive that ordinary people would not be able to buy them.

We get by far the greater part of our cotton from the United States of America, and it enters our country through the great port of Liverpool, which your map will show you is our most convenient port for ships from the United States. It is rather strange that we should get the best part of our cotton from that country, and yet that we should make twice as many cotton goods as the United States.

The cotton comes into Liverpool and is sent from there to the big cotton-spinning towns on or near the South Lancashire coal-field. A great deal of the cotton-yarn and cloth then finds its way to Manchester, which is a city of cotton warehouses ; from here the goods are sent down the Ship Canal to all parts of the world. This canal can carry

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large ocean steamers and has turned the inland city of Manchester into a seaport.

You may ask why the making-up of the cotton is done in this particular part of England. It is because a damp atmosphere is necessary for working with cotton. Lancashire is a rainy county, because it lies on the windward side of the Pennine Range and right in the path of the wet south-west winds.

Of course there are other rainy districts in our country, as you know quite well, but this is the particular rainy district which lies near to the most convenient port for taking in the cotton from the United States. So there the cotton industry is fixed, and is likely to remain fixed so long as England is a great workshop.

Besides, as we have already seen, there is plenty of coal in this district for working the machines in the mills. And in the county of Cheshire, not far away, there are chemical works which make many of the dyes required for dyeing or printing the cotton.



AMONG THE PENNINE HILLS.

Most <sup>tr</sup>all of the so-called "cotton" towns make other things besides cotton-yarn and cloth. You see, they stand on or near a rich field and not far away from iron mines, so they make a great deal of the machinery which is used in the mills.

It is not easy to pick out the most "important," but if we go by the number of people in them, five of the leading towns after Liverpool and Manchester are Bolton, Oldham, Blackburn, Preston, and Burnley.



## 3. OUR LINEN SUPPLY

The cotton and woollen country lies roughly between Hull and Liverpool. But we must cross the sea to the north-east corner of Ireland to find the chief linen country.

Linen is made from the flax plant which, when full grown, stands at a height of about three feet, and bears a very pretty blue flower with five petals. The seed of the plant is known as lin-seed, and it is very useful. Oil is pressed from it, and linseed oil is put to several uses, about which you can ask your mother when you get home.

The seed crushed into a kind of meal is also made into oil-cake, which is used for feeding cattle when they cannot get out upon the pastures in the winter because of the snow or heavy rains. Linseed meal also makes a good poultice for people with very bad colds on the chest.

It is the stem of the flax plant which is

used for making linen. When it begins to turn yellow it is torn out of the ground by the roots, and the seeds are taken from the tops of the stems by passing them through a "retting" comb. The stems are then put through various processes, which I have not space to describe, and the linen fibre is spun into thread.



Some of the best linen thread is used for sewing, and the rest is woven into linen cloth.

This cloth is made into collars, dresses, table-cloths, sheets, towels, handkerchiefs, and a great many other articles used in our homes. Linen is more expensive than cotton, and much finer and whiter, as all girls know very well.

It is more expensive, partly because it is very difficult to grow good flax. Although it can be cultivated in most temperate and warm countries, it is rather particular about the kind of soil it requires; and the state a few

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the plant must be soaked in very pure, soft water, free from lime, which cannot be got in all districts.

Besides this, the flax field must be very carefully weeded by hand, or the crop will grow rank and will be quite spoilt. The making of linen cloth is also harder than the making of cotton. But for beauty and hard wear linen is much to be preferred, and the Irish linens are the best of their kind in the world.

Belfast is the great linen town, though the manufacture was brought to the Irish city by Scotsmen about three hundred years ago. They found out that the water of the neighbourhood was excellent for bleaching the linen, and the "lawn as white as driven snow" soon became famous even in lands which already made very fine linen of their own.

At first most of the flax was grown in the immediate district, but for a long time now the flax supply of our own islands has been so small for our needs, and a great deal is brought to us from the Continent of Europe,





A TYPICAL SCENE ON THE NORTH-EAST COAST OF IRELAND.

chiefly from Russia. Some of the linen made in Germany used to be sent to Belfast to be bleached, and was then sold as "German linen with the Irish bleach," which, of course, was a compliment to Ireland.

Armagh and Londonderry are also famous linen towns, and the latter makes a special feature of its shirts. The county known as Fife, to the north of the Firth of Forth, makes a great deal of linen cloth; and some is made at Bradford in Yorkshire, and a few

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other places in England. But north-eastern Ireland is the most famous linen district.

### 4. OUR LEATHER SUPPLY

However fine and good our clothes might be, we should not have much comfort without boots and shoes and slippers, for which we are chiefly indebted to the cow family.

Find out, in the middle of the map of England, the large river known as the Trent, which flows northward to the Humber. In the basin of this river large numbers of cattle are fed, for the grass lands are very good in these parts.

Now cattle provide not only milk and meat but also hides, which are tanned to be made into leather. So we find the county of Northampton famous for good leather and for boots and shoes, which are sent from this central county to all parts of the country.

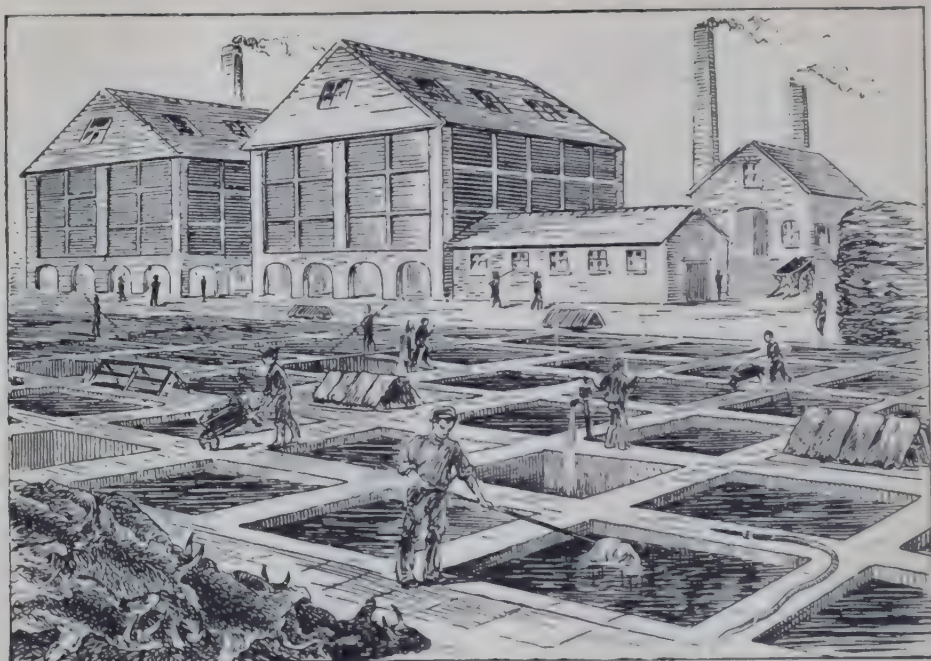
But there are not enough cattle killed in our own land to supply us with all the

leather we require. Hides, skins, and leather are sent to us from overseas, and come to all our big ports—to Liverpool and Bristol from America, to Southampton from South Africa, as well as to London, Hull, and Dundee from the countries on the other side of the North Sea.

The making of leather is one of the few things that can be done away from the great coal-fields. So we find that leather is one of the things still made in London, which, as you know, is far removed from the coal. Other industries, such as shipbuilding, have left London and gone to places where coal and iron are cheaper because they are nearer.

All the leather made in this country and imported from other lands is not used to make boots and shoes. Some of the finer kinds of leather are made into gloves. Gentlemen's gloves are made of stout leather, but that which is used for ladies' gloves is mostly made from the skin of the young goat, and is therefore known as kid.





A LONDON TANNERY.

Shortly after the war broke out with Germany in 1914, the price of ladies' gloves went up considerably; for some of them came from France, which was too busy fighting for its life to trouble about glove-making, while others came from Austria, which was on the side of Germany.

I leave you to make a list of the other useful things which are made of leather and used every day. You can do this very readily if you look about you, and you will find it an interesting piece of work; while, if you

happen to know a saddler, he will be able to help you a great deal.

We also import a large number of furs from



BEAVER.



SEAL.



SABLE.



BROWN BEAR (EUROPE).

various animals, and these rough skins are used for making articles of clothing of many kinds. We give



AFRICAN CROCODILE.

above the portraits of several animals which provide us with leather and furs.

## THIRD SECTION—SHELTER

## I. OUR STONE AND CLAY

WE are now to consider how our country provides us with houses in which to live, and the means of making them warm and cosy.

The chief building material required is either stone or brick. As a general rule, the stone houses are to be found in the middle and north of England, as well as in the West Country, by which I mean the peninsula of Devon and Cornwall. If you look at a physical map, you will see that these are the places where the highlands and uplands are to be found.

I do not need to remind you how often you find a stone quarry in the side of a hill or mountain.

Scotland, also, has mostly stone houses, as well as parts of Ireland and Wales; so we can, as a general rule, connect stone with the higher parts of our country. On the



other hand, we find most of the brick houses down in the flat plains where there is plenty of clay, as there is for a wide distance round about London and in the East Country.

Now test what I have said by looking round at the houses in your own district. Perhaps you know of a stone quarry or a brickyard quite near to your own home; either of these places is well worth a visit, and you may be able to find out a great deal about building material by means of a few polite questions put to the workmen.

In reasoning this matter out you must look at the ordinary houses in your district, not at the large buildings such as churches and town halls and big offices; for when a large important place like one of these is to be built, a lot of money is spent, and the stone may be brought from another part of the country, and some of it even from other countries.

But for the ordinary houses people use, as a rule, what is found in their own district.



THE QUARRIES AT PORTLAND IN DEVONSHIRE.

It is wise to do this in the case of stone houses, apart from the question of cheapness; for a stone house built on stone of the same kind always has a firmer foundation, and the walls are therefore less likely to crack.

In the middle, north, north-west, and south-west of England the chief stone used is sandstone, which may be yellow or red. It is rather soft, however, and the weather wears it down after a time. The hardest

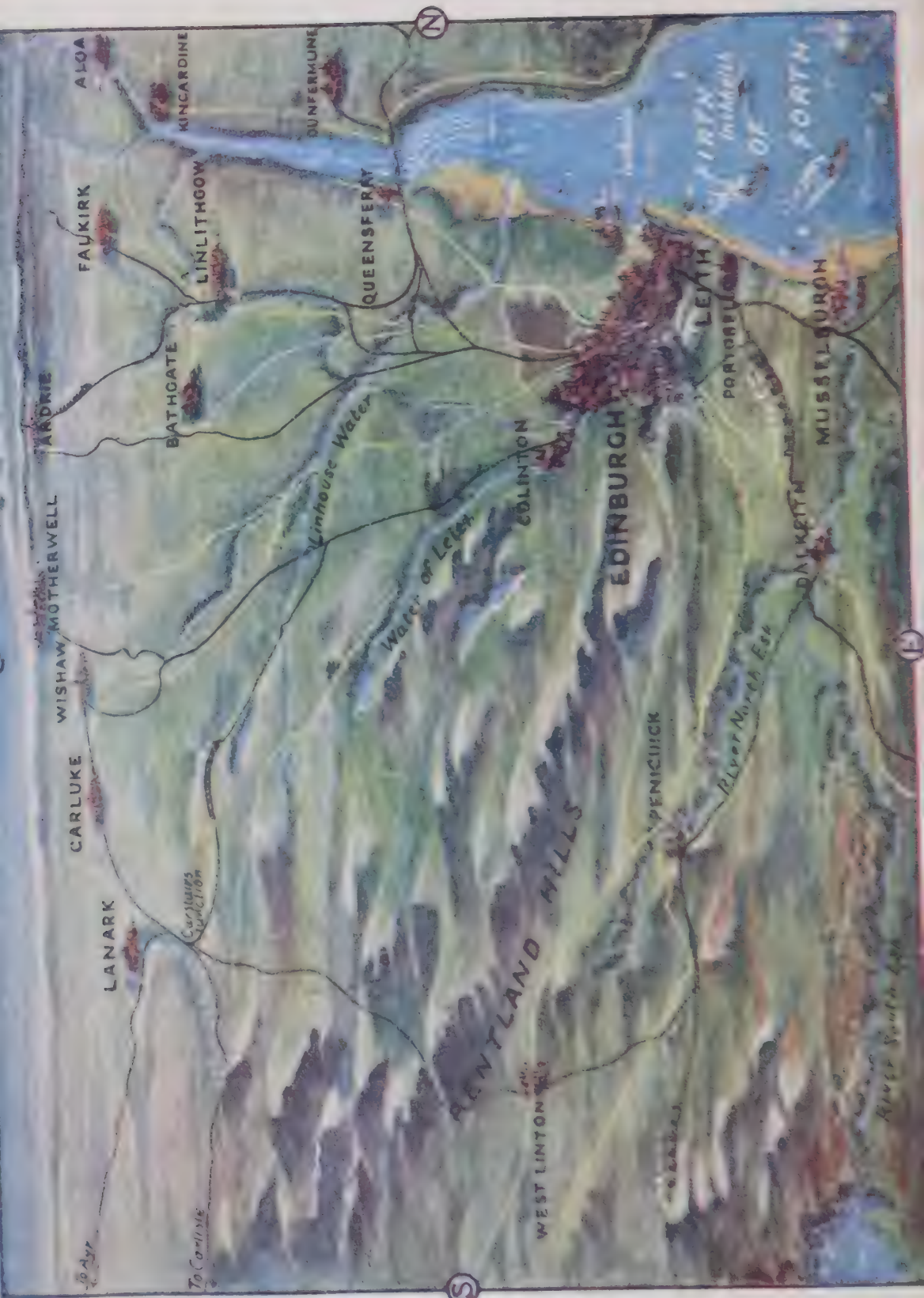
sandstone of all is found in quarries not far from Edinburgh, the capital of Scotland.

In the counties of Nottingham, York, and Durham there are fine quarries of limestone, which is harder and more lasting than sandstone. The stone used for the Houses of Parliament in London was got from some large quarries in Yorkshire, and stone from this county was also used to make the strong foundations of that very important building.

Very fine limestone is got from quarries in the Isle of Portland in Devon; and this kind of stone was used by Sir Christopher Wren when he built St. Paul's Cathedral in London two hundred and fifty years ago.

Most of the smaller houses in London are built of brick, usually a soft yellow brick which is made of clay mixed with fine sifted ashes. If bright red bricks are required for more expensive houses they are often brought from Norfolk or Suffolk, or the county of Stafford in the North Midlands.







A WELSH SLATE QUARRY.

In the east of Scotland there are many quarries of a very hard stone called granite, some of which is grey and some red. The grey granite has been used to build nearly all the houses of the city of Aberdeen, which is therefore often called the “granite city.”

Both red and grey granite can be polished very brightly, and are sometimes used as a decoration or finish in expensive buildings. Pillars in large halls and churches are often made of polished red or grey granite.

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In the north-west corner of Wales there are slate quarries among the mountains of the Snowdon district which supply excellent slates for some of our schools and for roofing our houses. Slate is very hard and can be readily split into thin sheets. There are also slate quarries near Tipperary and Cork in Ireland.

We do not need, then, to go out of our own country to get building material for our ordinary houses ; but I shall have another story to tell in my next chapter.

### 2. OUR TIMBER SUPPLY

You may perhaps know the song about our Navy in the olden days which runs :

“ Hearts of oak are our ships,  
Jolly tars are our men ;  
We always are ready,  
Steady, boys, steady !

We'll fight and we'll conquer again and  
again ! ”



But whether you have heard this song before or not, you know that the first line does not hold good in our own day.

Here is the song as altered by *Punch* after the British victory, off the Falkland Islands, won by Admiral Sturdee over the Germans :

“ Hearts of steel are our ships,  
Gallant tars are our men ;  
We never are wordy,  
(Sturdee, boys, Sturdee !)

But quietly conquer again and again.”

Now in the time of Nelson the first line of the old song was true enough ; and it was that time of continuous fighting on the sea which cleared the forests of Central England of most of their splendid oak trees. Some of them had stood there long before Robin Hood and his merry men had roamed beneath them in the time of Richard of the Lion Heart.

We still have, of course, many oak trees, oak-woods, and fresh oak plantations in various parts of the country ; but it takes a



IN THE NEW FOREST, HAMPSHIRE.

long, long time to grow an oak tree for timber. Fortunately our Navy does not need much oak to-day, but we could do very well with a good deal of this fine timber for building purposes; for it makes splendid beams and joists and rafters.

It is not only the oak trees which have been cut down. There was a time when the British Isles contained wide forests of excellent timber of many kinds, but most of these have disappeared.

You see, we cannot have wide pastures

and farm lands and open spaces for great cities, and still keep our forests and woods as they were in the old days when the country had not to support so many people.

So we have now to go abroad for most of our timber; and we must keep our Navy strong, so that we may always be sure of having a good supply even if we should be at war.

The Navy took most of the timber in the old days; so perhaps it is only fair that it should protect the timber ships which bring wood to our ports to-day.

The most important timbers for building are the various kinds of pine which grow in lands which are neither too hot nor too cold. We have many pine trees suitable for building purposes in our own islands, but we need so much pine wood that our own supply is scarcely worth mentioning.

So we get supplies of this useful timber sent across the seas from east and west and north and south. There are wide forests in the



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United States and Canada, where the lumbermen work hard at tree-felling. They spend many weeks of the wintry weather in the great forests making the tree-trunks into huge rafts, which they send floating down the streams in the spring-time.

A great deal of the wood used by our builders for roofing and flooring has come across the Atlantic from the wide forests of the New World. But many of our doors and window-frames come to us ready-made from Sweden and Norway, which are on the other side of the North Sea.

It is always interesting to learn how far the lands of the British Empire can supply the Mother Country with what she lacks herself. Canada, as we have seen, can send us pine wood of various kinds. India has in her enormous forests no less than 900 kinds of wood which can be used for building purposes.

This great country is sending us more and more wood every year, and among the best is



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the hard teak-wood which is used to form a backing for the steel armour-plates of our battleships as well as for making the deck. Our sailors, therefore, might sing with truth :

“Hearts of teak are our ships.”

There is a very tall pine grown in New Zealand called the kauri pine, which is excellent for building purposes. This timber is now being sent to the Mother Country and used in house-making.

Australia, too, grows a very durable and easily-worked wood called jarrah; and the other day I watched some men laying blocks of this wood to make a London roadway, and filling the spaces between the blocks with melted tar.

There are wide forests full of fine timber in the hot lands on or near the Equator; but these woods are the more expensive kinds such as mahogany and satinwood, which are used for making furniture and smaller fancy articles.



I expect that you could learn more about this subject from a carpenter or cabinetmaker if you are lucky enough to know such a man.



### 3. OUR COAL SUPPLY

When we speak of the climate of a country we mean the general state of the weather. I do not need to tell you how important the climate of any country is to the people who live there.

The best of all climates is one which is neither too hot nor too cold. This is known

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as a temperate climate, and we are blessed with such a climate in our own country.

Our winters are often very cold, and even the spring weather is sometimes anything but comfortable. But snow and frost do not stay with us very long, and it is not often that they stop the work that has to be carried on in the open air.

Our summers can be very hot, at least in the south of our islands; but our so-called "heat-waves" do not last long, and they have very little effect upon the daily work that must be done. They do not force us to spend the hottest part of the day in rest or sleep as the people of Spain find it necessary to do.

We get as much rain as we want for watering the land and filling the rivers and the reservoirs, but as a rule we are not troubled with floods. We sometimes have very dry seasons, but we know nothing of the drought of some countries nearer to the Equator. On the whole we have a comfort-

able climate, for which we ought to be truly thankful; but I am afraid we are not, for British people are continually grumbling at the weather.

Of course we need protection against it, and we attend to this matter in the kind of houses we build. They must be substantial and capable of keeping out cold draughts and rain. And if they are strongly built, with good thick walls, they will keep out the heat all the better if a heat-wave should come to us from America, where they seem to make things of this kind.

The warming of our houses in winter and spring is a very important matter also; and for this purpose our country is able to supply us with all the coal that is necessary. At last we have come to something of which we have enough and to spare at home; something, indeed, which we can also use to exchange for other useful things from lands across the sea.

As I expect you know, coal is found in the



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rocks of certain districts which are known as coal-fields. These are not the prettiest and cleanest parts of the country by any means, but they are some of the most useful; and after all it is not easy to light the fire and keep your hands clean, is it?

If you draw a line on the map from the Wash to the head of the Bristol Channel, and another from the head of the Firth of Tay to the northern point of Loch Lomond, you will enclose the chief coal-fields of Britain. Very little coal is found in Ireland, where many of the peasants burn peat from the bogs.

I do not mean that coal is mined all over this wide middle part of Great Britain; for the coal occurs in broad patches or "fields," upon each of which stands a group of busy and important towns. For, as we shall see later, the coal got from our mines is not only used for warming our houses, it is used also in the great factories and workshops of the large towns on the coal-fields, as well as on our railways and in our ships.



IRISH PEASANT GIRL BRINGING PEAT FROM THE BOG.

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There is a great coal-field between the Firths of Forth and Clyde, on which Glasgow is the chief city. There is a very rich and famous one round about Newcastle-on-Tyne. There is one in the Midlands which keeps the factories of Birmingham, Sheffield, and Leeds very busy all the year round. There is one in South Lancashire to which Wigan and Manchester and Liverpool owe a great deal of their activity; another in Shropshire which keeps the pottery towns going; and a very valuable one in South Wales to which Cardiff and Swansea, to say nothing of the British Navy, owe more than I can readily set down.

As for London, it must be kept supplied by means of a constant succession of "mineral" trains filled with "Tyne Main" and "Derby Brights" and "Best Wallsend" and other famous coals. And, as you might expect, coal is dearer in London than on a coal-field.



I will leave you to think out the reason for this.

The room in which I am writing this chapter is not heated with a coal fire but by means of a gas stove; but the gas would not have been there if it had not been for the coal in the first place.

Gas is now largely used for heating purposes as well as for lighting, and in some large buildings such as schools and churches, the heating is done by means of steam or hot air; but once again the steam or heated air would not be there if it were not for the coal in the first place.

Many of our houses and other buildings are now lighted with electric light, and electricity is also used for cooking. But the electric power would not be there either if it were not for the coal which is used in the power-houses.

## 4. IRON STOVES AND OTHER HARDWARE

It is not of much use having plenty of coal to warm our houses if we have no iron stoves to burn it in. And if you look about your house or about the schoolroom in which you are sitting, you will find many other things made of iron which could not be done without in building. Try to name a few of them.

Do not forget the iron nails which help so much to hold a building together. There are also iron pipes used for various purposes hidden beneath the floors and in the ceilings.

Some of the bright things, such as the "bolts" of the locks on the doors, are made of steel; and you may as well put down also any steel things which you can find about you, for steel as well as iron is made from iron-ore.

I had almost forgotten the iron and steel tools which the builders would use in building the house or school. Perhaps you can



also name a few of these useful tools. Then you might finish up by naming a few things of steel or iron which you may have about your own person.

Iron is made from iron-ore, which might be called iron-rock, for it really consists of iron mixed with hard earth. The iron is separated from the earth by smelting the ore in a blast-furnace (see above) in which the heat is very fierce, so fierce, indeed, that it turns the iron into a kind of liquid.

This liquid iron is allowed to cool, when

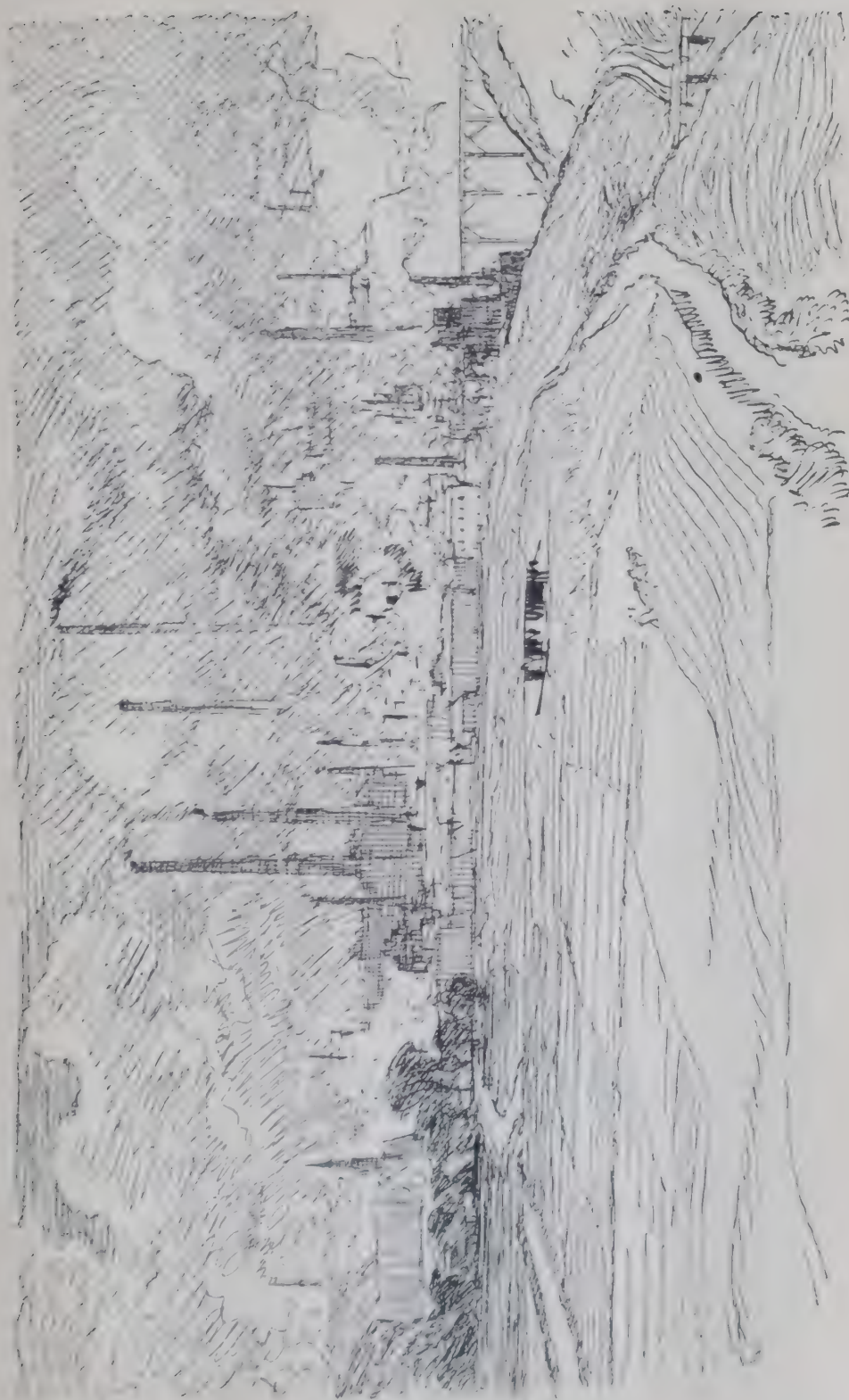


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it is called pig-iron. But it must pass through many other processes before it can be used to make the iron and steel goods which we see around us.

Find out on a map of the British Isles the large Midland city named Birmingham. Not very far away you will also find Wolverhampton. Between these two places is the district known as the Black Country, because of the smoke from the furnaces and chimneys of the great ironworks of this part of England. Another district in which iron is smelted is that of which Sheffield is the centre, while a third is situated round about Middlesbrough, near the mouth of the Tees.

Between the Firths of Forth and Clyde there is another rich iron district; a second round about Barrow-in-Furness near the north shore of Morecambe Bay; and a third in South Wales, of which Cardiff and Swansea are the busiest centres. And near all these iron mines the necessary coal is also



THE LANDSCAPE NEAR LEEDS.

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found, so that the smelting of the iron-ore can be cheaply done.

In spite of all the iron in our own country, however, we are obliged to get a great deal from foreign lands ; for there are many more things to be made of iron and steel than those which we use in our dwelling-houses and other buildings.

I shall name only our ironclads and guns, our great ships and bridges, and leave you to make up a list for yourselves, as you can readily do if you take the trouble to look around you in the streets and parks of your own town, as well as on the railway. We shall return to this matter again in a later chapter.

If you go to the hardware or ironmongery shop, you will find a great many useful household goods, made not only of iron and steel, but also of brass. Good brass is made of copper, tin, and zinc, and is expensive ; and I expect that if you looked closely into some of the so-called brass articles, you would find





COALING A LINER AT SOUTHAMPTON.

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that they were made of iron covered over with what is known as a brass lacquer. Most of the best real brass goods are made in Birmingham.

We have, then, plenty of coal in our country, but not enough iron for all our needs; for we not only require iron for our own use: our ironworks make iron and steel goods for all parts of the world. And it is by means of these iron and steel goods that we pay for a great deal of the food and wool and cotton which we cannot provide ourselves.

Fortunately there are many places in the world from which we can draw our iron supplies. There is iron-ore in Canada and other parts of America, as well as in Spain and Russia and Sweden, so it is not likely that the supply of this very useful mineral will ever fail. We shall learn more about it when we come to enquire where our battle-ships and great liners are built.

## FOURTH SECTION—EDUCATION

## I. OUR INDOOR SCHOOLS

WE have seen how our country feeds, clothes, and shelters us. The next great need for civilised people is education. Let us see how our country provides for us in this respect.

In this matter British boys and girls are very well off, though they do not usually think so until they are no longer boys and girls. Then they begin to see how badly they would have fared in the world if they had not been well taught at school.

The Government of our country, who have their offices in London, do their best to see that a school is provided as near as possible to the home of each boy and girl. In large towns there is usually a school just round the corner; in smaller towns pupils may have to travel a little farther to their classrooms; and in the country districts there is often a long walk to be taken. I



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hope I have now set you thinking about the school supply of your own district. It is quite as important as the food supply or the supply of water and houses.

Of course, as I have already hinted, London is the centre of the work connected with the schools. Here are the offices full of clerks and secretaries who know all about the schools all over England and Scotland; but Irish schools are managed from Dublin.

The inspectors, those terrible gentlemen who come to visit you now and again, write letters to London or Dublin telling the gentlemen there what they think of your reading and your writing and your arithmetic; for you see the whole country is interested in your school work and means to make you as fit as possible for doing your duty as men and women. Perhaps you have never looked at your school life in this way.

These gentlemen in London and Dublin also see that the schools all over the country are supplied with teachers who have been



KINGSTON HARBOUR, AT THE ENTRANCE OF DUBLIN BAY.

well prepared for their important work. There are special teachers' colleges in all parts of the land where this training work is done.

If I tell you that most of the large cities and a good many smaller ones have training colleges for teachers, you will be able to name some of them for yourselves; for the names of these places are being mentioned again and again in these chapters.

London has not one but many training colleges; but then, you see, London is really many cities rolled into one.

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Say to yourself: "I am one of seven million pupils who are at this moment as hard at work as I am in the schools of the British Isles." Perhaps this will help you to do your best to beat all the others!

Seven millions is a very big number of boys and girls, is it not? It means that one out of every six people in these islands is at school or ought to be at school. And the best of it is that there is little or nothing to pay for the best kind of education in the world—and the best books too; for if you do not value your pretty well-printed school-books, you ought to be made to use some of those dealt out to the boys and girls of other countries.

Only the children of the British Empire and of the United States—where they speak English too—have pretty and well-printed books like these, and I hope that you take great care of them. I will tell you a little more about them in a later chapter.



## 2. OUR OPEN-AIR SCHOOLS

It is not only within the four walls of your school building that you can learn things which will be useful to you in later life. Even the gentlemen in London and Dublin believe this, and say that school walks and excursions are very good things when they can be conveniently arranged.

Then there are the Boy Scouts, who learn their geography without knowing they are learning at all. Very little thought about them will soon prove that what I say is true.

In the first place, it is not long before the smart Boy Scout or Girl Guide knows all about North, South, East, and West, and how to find the North by day or night. This is one of the easy matters that even a Tenderfoot laughs at.

Then he learns a great deal about the Union Jack and when it is right side up and upside down; and he cannot look at it without remembering the names of the

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countries which go to make up the British Isles. What are they?

There is no need of a book or even a picture to tell a Boy Scout what a river is, or a hill, or a mountain, or a plain; for he has learnt these things as a very ordinary part of his scouting, and neither knew nor cared to know that he was learning geography all the time.

It is not long, too, before the Boy Scout learns a great deal about the animals, birds, and fishes of our country, especially if he wants to win the badge given to the Friend of Animals or the Naturalist.

Of course the British Boy Scout does not have the luck to meet with any of the larger wild animals. He may, if he is *very* fortunate, catch a glimpse some day of the red deer in the Highlands of Scotland, but he would have to go out with the deer-stalkers to do this.

Or he might see a poor tired fox during the hunting season, or watch an otter hunt



BEN NEVIS, THE HIGHEST BRITISH MOUNTAIN.

down some swollen stream. For the rest, however, he must content himself with very small but very interesting wild things. He knows from one of his scout books that "every animal is interesting to watch, and it is just as difficult to stalk a weasel as it is to stalk a lion."

Of course he never mistakes a rabbit for a hare, or a squirrel for a weasel, or a mole for a rat. But I expect he sometimes wishes that he did not live in a country quite so civilised, and that he might have the chance



of seeing a big bear or a kangaroo ; for these things he must go to the Zoo at London or Manchester or Edinburgh.



There is more variety among the birds of our country ; and the Boy Scout soon learns to tell one from the other and even to distinguish their song. The larger field birds are fairly easy to tell, though it is a little confusing to distinguish grouse from pheasants, except, of course, the cock pheasant, who is very handsome in colour and has a long tail.

The long-legged and long-billed heron is

easily distinguished, but he must be sought for by the bank of some lonely stream where he feeds on the fish. The wild duck may sometimes be seen in the same district, and I know a lonely spot in the south of Scotland where hundreds of them make their nests; but it is a long, long walk to this lonely lake, and you must set out very early in the morning to see the wild ducks nesting.

Our smaller birds are just a little puzzling, and it takes some practice before even the smartest of Boy Scouts can tell one from the other. The lady blackbird is rather like the thrush at a distance, though her husband's golden dagger of a bill is unmistakable.

The robin is the brightest of the small birds, but the tits (great-tit, cole-tit, marsh-tit, and blue-tit) are perhaps the prettiest, though it is hard to get a good look at them. The starling does "sentry-go" on the lawn because he does not want to miss anything in the way of a worm or grub; while the blackbird hops along rather carelessly, perhaps

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because he knows that he can always steal the cherries for dessert, and therefore does not need so much flesh food.

But we might speculate all day about the habits of the birds; and if you are a Boy Scout or a Girl Guide I expect you know a great deal more about the birds than I do, and about the trees of the woods also.

“Of all the trees that grow so fair,  
Old England to adorn,  
Greater are none beneath the sun,  
Than oak and ash and thorn.  
Sing Oak and Ash and Thorn, good Sirs  
(All of a Midsummer morn)!  
Surely we sing no little thing  
In oak and ash and thorn!”

The Scout's notebook helps him to distinguish the oak, the ash, the elm, the poplar, the plane, and the horse-chestnut, which are among our best-known forest trees in England; while the Scottish Scout is





BEECH.



BEECH-NUT.



LEAVES AND FRUIT OF OAK.



OAK.

perhaps more familiar with pine and fir, the larch and the birch.



SCOTCH FIR.

As for the reptiles, every one knows of the frog and the toad, though every one does not know the difference between them. We are happily almost free from poisonous snakes, and only the viper can do us any harm in this way. It is differently marked from the other

snakes, having a black arrow-shaped mark on its head and a dark zigzag line along its back.

### 3. OUR COLLEGES AND UNIVERSITIES

After school comes college, for those who are fortunate enough to be able to go. In our country it is possible for boys and girls who are not very well off to win scholarships

at some of our colleges; and here they can go on with their education until they are young men and women.

There are certain towns in the British Isles where these colleges are to be found; and in England the two most famous of these towns are Oxford and Cambridge.

Oxford is a beautiful city in the Upper Thames valley about an hour and a half from London. Here there are a number of colleges which together make up what is known as the University of Oxford.

During term-time at Oxford the streets are full of students, who wear black gowns and caps with square boards above them which some people call "mortar-boards." The students attend lectures mostly in the morning, and the afternoon is given up to games which keep the young men strong and healthy.

Then come examinations, which are not quite so pleasant as the games but quite as important; and those who have done



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well during their three or four years' course are given "degrees," which give them the right to use certain letters after their names.

Another English university town of the same kind is Cambridge, which is in the East Country about an hour and a quarter from London. The streets of this place too are full of students in cap and gown; and, as at Oxford, the college buildings are very old and very beautiful. The square courts of the colleges, known as quadrangles, are covered with the greenest of turf, and the playing fields and river are the training ground of some of the best athletes in the world; for in our country we think that education is a matter which concerns the body as much as the brain.

But Oxford and Cambridge are not the only university towns. Every large and prosperous city now wishes to have its own university, and several new ones have been set up in recent years. There are also other universities as old as Oxford and Cam-



TRINITY COLLEGE CHAPEL AND ST. JOHN'S GATEWAY.  
CAMBRIDGE.

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bridge; Glasgow has one and so also has Edinburgh and Dublin.

Then there are newer universities at Liverpool, Bristol, Leeds, Manchester, Sheffield, and Cardiff; while at Newcastle there is a college which is part of the University of Durham, an old university on the banks of the Wear. So you see how each of the big cities now wishes to have its own university.

This is not, however, merely a matter of pride. The newer universities often try to make their teaching suit the work of the district in which they are situated. Thus at Leeds the students can learn all about the dyeing which has to be done in the woollen factories of Yorkshire.

At Newcastle they can learn engineering and study things which will be helpful in the work of shipbuilding and in the coal-pits of the north. At the college in this city there is also an interesting course of study in trees or "forestry," which will be very useful to





NEWCASTLE-ON-TYNE.

young men who are going out to the far-away parts of our Empire. They study all about the trees and how to grow them as well as how to make the best use of the timber when the trees have been cut down.

#### 4. OUR PAPER AND BOOK SUPPLY

A great man once said that a well-selected collection of books is the best of all universities. I hope you have already begun to make your own collection. There is no excuse for you in these days if you do not

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very soon begin to have a little home library, for books are cheaper and better printed in our country than in any other land in the world.

Besides books we have a very large number of newspapers and magazines, and if you buy the best of these you can go on educating yourself long after you have left school. Do you ever wonder where we get all the paper which is used to make our books, papers, and magazines, and whether our own country is able to supply the material for making this paper?

What is the material required? Well, for the best kind of paper we need a lot of linen rag. But paper made from linen rag is very expensive and is only used for books which sell at a high price. Ordinary paper is made from wood-pulp or a kind of grass called esparto with rag mixed in with it. But wood-pulp is now used more than anything else.

You ought to know already that this

wood-pulp cannot be got from our own country but must be brought from across the sea. The question at once arises whether it can be got from some part of the British Empire.

I am glad to be able to tell you that a great deal of it is brought from Newfoundland on the other side of the Atlantic. Newfoundland is an island near to Canada which has very large forests in the central portion. Here there is also a great river with a big waterfall, and this river is used in two ways to help in the work of making the paper.

The logs of spruce pine are floated down the stream to the paper mills ; and the power of the rushing water is also employed to drive the machinery used in making the pulp from the wood by crushing it. The same water-power drives the machines which make the paper.

Paper-pulp is also sent to us from Canada, so that we have a good supply of this very useful material within our own Empire ; and,





IN A LUMBER FOREST

as we have agreed, this is the next best thing to getting it from our own woods and forests which are now so small.

We also get wood-pulp from Norway, where there are very large forests of the soft timber trees which can be readily crushed to pulp. The forests of the United States produce a great deal of wood-pulp as well.

Esparto grass is grown mostly in Spain, and is used in our paper-mills for making paper of many kinds. Straw is also used



LUMBER RAFTS.

for the same purpose, as you can see if you look closely at some of the paper which comes from the draper's shop.

Now wood-pulp, grass, and straw must be mixed with rags if good paper is to be made ; and our own country does not supply us with all the rags we need . We get rags from Belgium and other countries on the continent of Europe, but not nearly enough.

If you wish to make a great fortune when you leave school, try to find out some





ST. PANCRAS STATION, LONDON, IN THE EARLY MORNING.

substance which is tough and fibrous and very cheap from which paper can be made.

We have paper-mills in all parts of the country busily turning out hundreds of miles of paper every day. These mills are not to be found in any particular part of the country, though, of course, it is convenient to have them near the people who use most of the paper.

Many of them are near London and Edinburgh, for these are the two great printing places where most of our books are made



and from which they are sent out to the book-shops in all parts of the land.

This book which you are reading was written and issued or published in London after being printed in Edinburgh, as you are informed on the title-page and on the last page of all. Most of our chief newspapers are also published in London, and the "newspaper trains" leave early in the morning to take the papers to all parts of the country.



## FIFTH SECTION—WORK

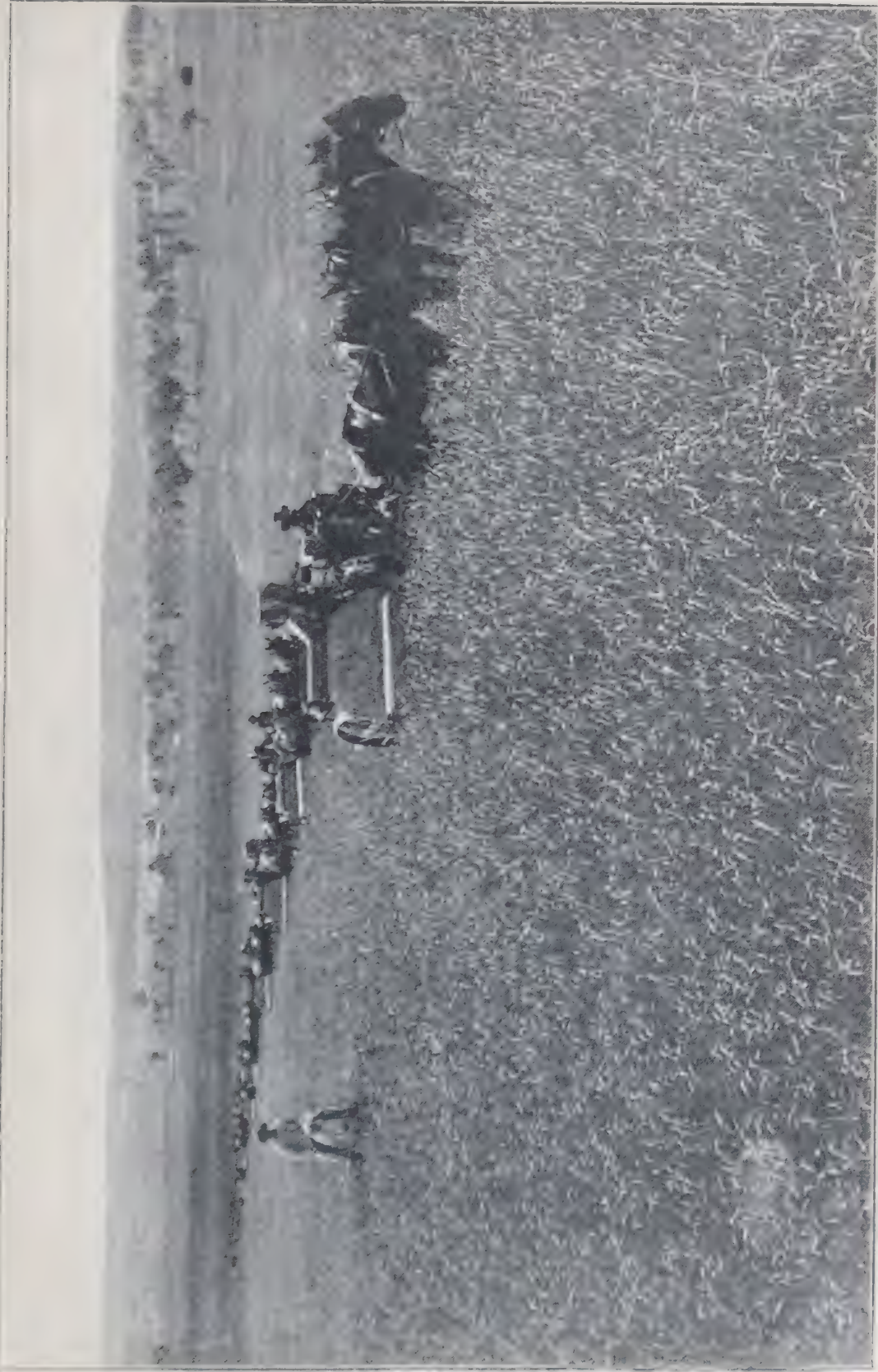
## I. WHAT SHALL I BE?

HAVING been properly educated, a boy or girl naturally looks round to find work by which a good living can be made. The kind of work taken up will, of course, depend to some extent upon the kinds of work done in the district in which a person lives.

When a boy faces the question "What shall I be?" he has come to a very important moment in his life; and it is here that a knowledge of geography can often be of real help. For geography teaches what occupations are most necessary in the life of our country, and are therefore likely to give a bright and careful worker opportunities for making the best of himself.

A well-educated person who knows his geography does not despair when the work fails in a certain district for one reason or another; he makes ready to follow the work





AT WORK ON AN AUSTRALIAN FARM.



even if it leads to another part of the Empire.

If he knows his geography he knows the chances offered to him in foreign countries, or, better still, in other parts of the British Empire, where he can work under the government of his own people. If we keep these things at the back of our minds we shall find our geography lessons much more interesting. It was a man who knew a great deal about the shapes of mountains who first discovered gold in Australia more than sixty years ago.

About half the people who work for their living in this country work in our mines, factories, ship-yards, and workshops. For, as we have seen again and again, our making of things in which we use our coal is made to pay for a large part of our food and clothing. Only about two workers out of every fifteen are engaged on our farms and in our fisheries.

About two out of every fifteen of our

workers are engaged in selling things. These are the merchants and the clerks in their offices, the workers in the large warehouses of our great ports, the shopkeepers in our towns, and the sailors of our merchant ships.

The rest of our workers are engaged in ordinary times in governing the country or defending it on sea or land or in the air; while a good many people are constantly changing their work, and some lazy ones manage to escape work altogether.

Now let us try to find out a little about the chief kinds of work done in our country. If we were to go the right way about this matter, I should ask you to write the next chapter of this book and tell me all about the chief industries of your own town or district; but, as this is impossible, perhaps you will discuss this important matter with your teacher before you read the next lesson.

## 2. THE WORK OF THE COLLIERS

You cannot get far in making things without feeling the need for coal.

Now, as we have seen, whatever else we lack we have a plentiful supply of this valuable fuel. It has been called the "black diamond," but it is really much more precious than diamonds to us.

You have already found out on the map the position of the great coal-fields. If you point them out once more you will be marking the districts where thousands of boys and men find employment in the coal-mines.

Their work is very hard and it has many dangers. Too often we hear of some great colliery explosion in which perhaps hundreds of men have lost their lives, either by fire or through being shut up in some far-away part of the pit.

But the British collier takes his chance like a brave man, and the danger of his daily work does not prevent his sons from taking



up their father's calling. In many colliery districts there will often be four or five and sometimes more men of one house all at work in the same pit.

Great care is taken to prevent explosions and other accidents in the pit. But in spite of safety-lamps and good ventilation accidents still happen; for the gas which comes from the coal is very deadly.

The mention of this gas reminds us that the coal of our country does not only provide work for miners. A great deal of it is used to make the gas which lights our shops and houses; and the gas-works, which you will find near to each town of any size, employ a large number of people.

While the gas is being made tar is got from the coal, and this is very useful for many purposes; as you must have seen it is now much used for making dustless roads, so that the motors can run along without making the poor people who have to walk dusty and uncomfortable.

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From coal-tar, again, dyes can be made which are used in making cotton, linen, and woollen cloth. The chemists of Germany<sup>1</sup> found out many things about these dyes, and the making of them used to be carried out almost entirely in that country.

When the war broke out in 1914, it was feared that many of the workers in the mills of the North would lose their employment owing to a failure of the supply of these dyes; and clever men soon got to work in this country to make the dyes required. This ought to be done in our own country, seeing that we have plenty of coal-tar from which some of these dyes are made.

You see, then, that our coal provides work for a large number of people of various kinds before it reaches the work-shops and factories where it is used as fuel for making things.

<sup>1</sup> It was an Englishman who first invented them.

## 3. IRON AND STEEL WORKERS

One of the chief uses to which we put our coal is to make iron and steel from iron-ore. As you may remember, the coal and iron are usually found together; and not far away on some iron-fields the lime is also found which is usually necessary for smelting iron-ore.

The men who attend to the great blast-furnaces in the Black Country, in Middlesbrough, Barrow, and other places, have very hard and dangerous work to do. You can see from the pictures on pages 109 and 146 what blast-furnaces are like; and when they have been lighted they need very careful management.

When once a blast-furnace has been started, it is kept going day and night for years together. If it goes out or is put out it takes quite a long time to start it again—sometimes two or three weeks.

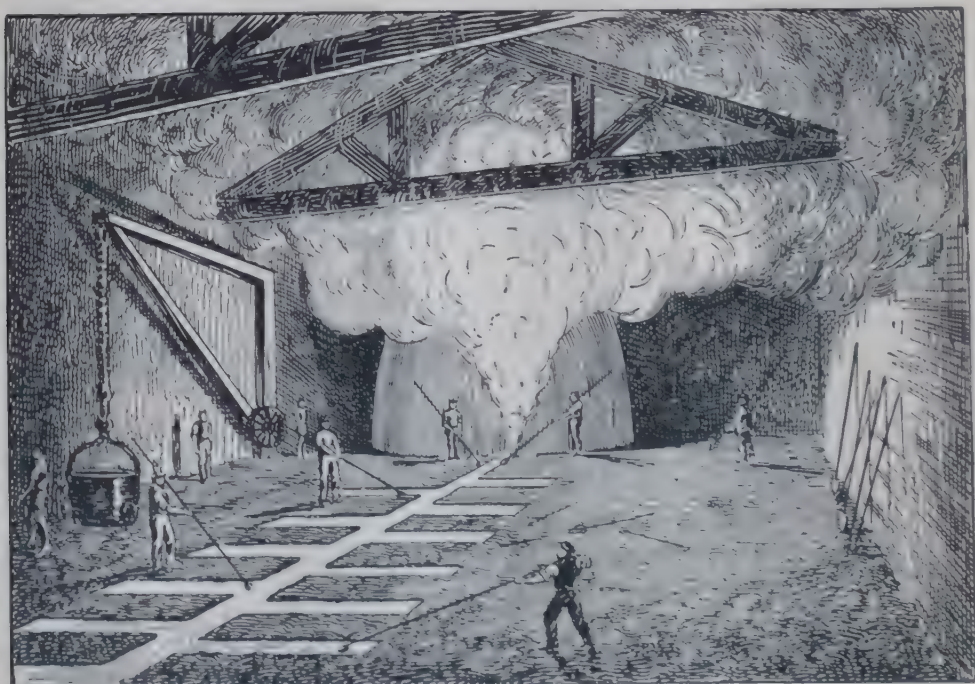
The furnace is filled with layers of coke, ore, and limestone in this order, and a very fierce draught of hot air is sent into it, which



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melts the iron in the ore. The earthy part floats on the top of the molten iron and can be readily separated.

The molten iron is run off at the bottom of the furnace, and some of it goes into a



trench in a bed of sand. This trench is called a sow, and others which branch off from it are called pigs; so we get the term "pig-iron," because long ago some one said that one of these trenches looked like a sow and a litter of pigs.

Iron in this state can be run into moulds

and used for making such things as railings and gratings, which are very brittle as you may have proved. If unbreakable iron is required, the pig-iron must be melted again and put through various processes which convert it into "wrought" iron. This can be bent and twisted into all kinds of shapes.

Steel is made by heating pig-iron again until it is in a molten or liquid form and blowing air through it so as to clear it of certain impurities. Steel is not only tough but hard and can be worked into a very large number of useful articles, especially those which, like knives and scissors and razors, require a very sharp edge.

If you wish to see what hard manual work is like, you ought to go to one of the great steelworks in Sheffield where the armour-plates for our battleships are made.

One of the hardest tasks is the rolling of a steel-plate to make it of the right thickness for the sides or turrets of a ship-of-war. The huge plate must first be heated in a fierce

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furnace until it is red-hot; and the stoking of this furnace can only be done by very strong men.

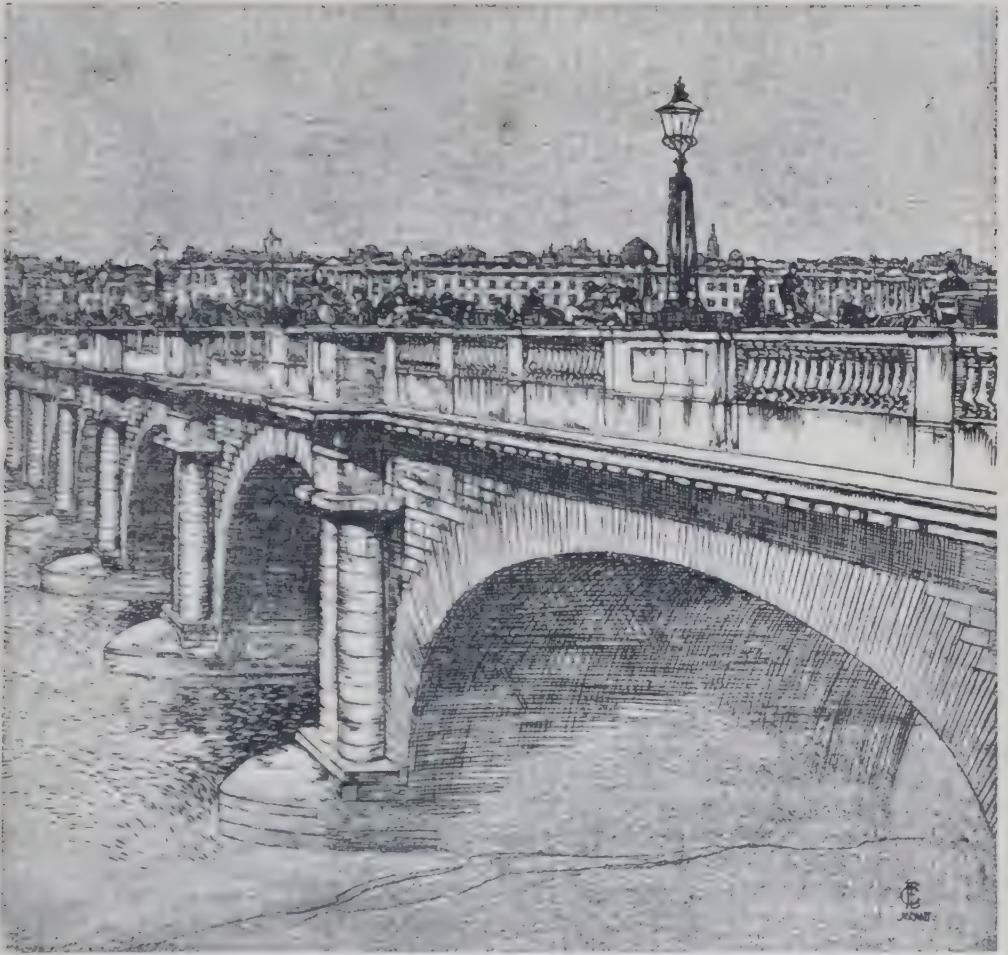
When the plate has been heated in this way, it is passed between large steel rollers and so made thinner; while this is being done, the surface of the steel becomes rough, so it is made smooth in the following way.

The men throw bundles of dry brushwood upon the plate, and, of course, these flame up at once with a great roar. This burning of the brushwood loosens the "scale" which has formed on the surface of the steel, and the workmen scrape it off with long hoes.

Passing under an arch in the Tube Railway to-day, I noticed on one of the strong steel girders which held up the roof the words, "Middlesbrough, England." Later in the same day I passed a huge hotel which was being built of glazed fire-brick, and again the steel girders bore the name of this northern town.

The sight of these names brought back to





WATERLOO BRIDGE IN LONDON.

my mind here among London's hurry and bustle the busy steel town of northern England at the mouth of the Tees and the long low line of the Cleveland Hills whence comes the iron-ore for the steel-works.

You see how much geography there is round about us if we keep our eyes open as we move about our daily work.

## 4. OUR SHIPBUILDERS

Having now got our iron and steel let us see what is done with some of it. We have space in this book to consider only the large things, and one of the most important for our island-nation is the iron or steel ship.

As you know, our ships used to be made of oak, and there are many timber vessels still sailing the ocean; but now we build most of our large ships of steel.

We consider the ship most important because Britain is a group of islands; and, as we have seen, we cannot exist without our ships. You will not be surprised, therefore, to learn that our country is the leading ship-building country in the world, and that some of the best ships are made in her yards.

At one time many ships were made on the Thames near London. But you will remember that this work has now left the great city, and has been taken to other parts of the coast which are not so far from the coal and iron.

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Ships are still built, however, at Portsmouth and Southampton, though these places are far away from the coal-fields. But many of these ships are towed to the Tyne or the Clyde to have their engines put in.

On the banks of the Clyde there are the largest ship-yards in the world. One large town after another is engaged in building steel ships or in fitting with engines ships which have been built elsewhere.

When shipbuilding was started on the Clyde, there was plenty of iron-ore not far away. But now most of the iron used in the Clyde ship-yards is got from Spain and Sweden and other foreign countries. It was on the Clyde that the first steamboat appeared about a hundred years ago.

The ship-yards on the Tyne come next in order, and here not only great steam merchant vessels are built but many of our large battleships. Large numbers of people in Newcastle and Jarrow and Wallsend are

engaged in work of some kind or other connected with ships or their engines.

The number of people who find employment in building a large ship is very great, and their work is extremely varied. There are smiths, carpenters, engineers, riveters, electricians, brass-workers, and many other men of smaller trades.

When the hull of a great liner is finished it is launched stern foremost, and the engines are then put in. When this has been done a great liner must now be fitted up so splendidly in every way that one would think it was a palace. Indeed, if King George III. were to come back he would think a modern liner much finer than his own royal palaces had ever been.

The coal and iron of north-eastern England are used also for shipbuilding on the Wear and the Tees. Many Liverpool ships are built at Birkenhead, which is not far from the great port on the Mersey; and at Belfast across the Irish Sea are some of

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the largest shipbuilding yards in the world. Here some of the biggest liners have been launched, and we are continually reading that Belfast has produced "the greatest ship in the world."

If you live near one of our large shipbuilding yards, you will know some things about the building of ships which I do not know. Boys who like drawing get employment in the drawing-offices of ship-yards, where the plans are made for different parts of the vessels.

Fishing-boats and trawlers are built at various places along our coasts, and there are busy yards at Aberdeen, where this kind of work is done.

### 5. BUILDERS OF ENGINES AND BRIDGES

A great deal of the steel made at Sheffield and Middlesbrough and other places is used for making railway engines ; and the making of these locomotives gives employment to a large number of men and boys.



Each great railway company has its own building "shops" in a town which is conveniently situated on the main railway line; and perhaps the best example of a "railway town" is Crewe in the county of Cheshire, where the engines and carriages of the London and North-Western Railway are made.

The North-Western starts from London and runs to Carlisle, so that Crewe is about half-way in the system. It was a very small place indeed before the railway company began to build its engines there; but it is now a large and busy town where every one is interested in the making of "rolling-stock." Here the main line from London to Scotland meets lines from Bristol, Manchester, and York.

The last-named city is another busy railway "junction," but it is not the place where the North-Eastern Railway makes its engines and carriages. These are built at Darlington farther to the north, and some used to be built at Gateshead, which is near to Newcastle, the "home of the railway."

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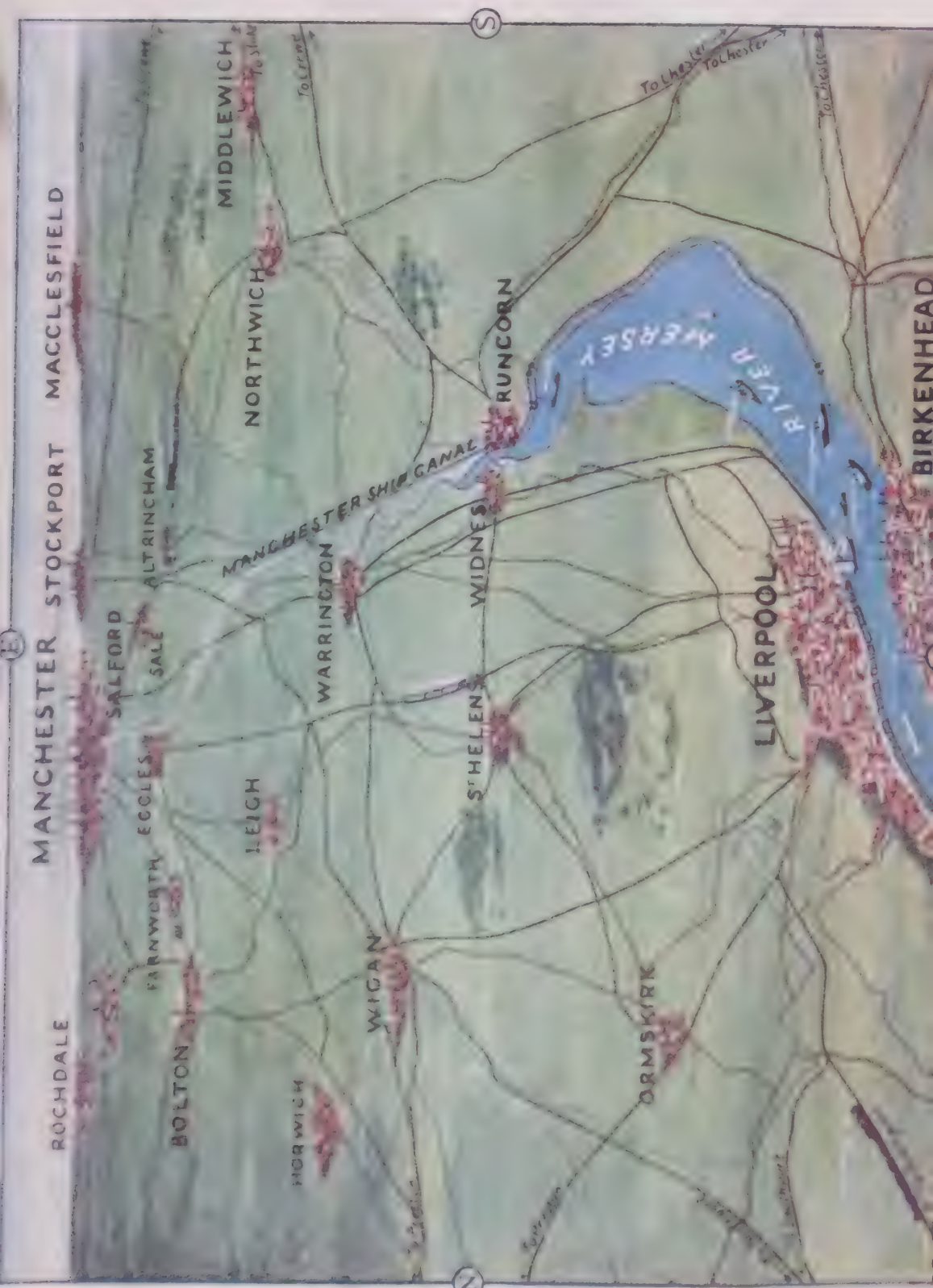
Derby is the town where the engines and carriages of the Midland Railway are built. The Great Western has made Swindon in the north of Wiltshire into a railway town; and you will notice that this place lies on the main line between London and Bristol, which is one of the chief places served by this line.

The rolling-stock of the Great Eastern Railway is built at Stratford, which lies to the east of London. The Great Northern has works of the same kind at Doncaster.

I think that if I were a boy again I should want to be a builder of bridges; for this work appears to be not only most interesting, but also exceedingly useful. You can easily see how difficult it would be to move about our country if we had no bridges.

Some of our finest bridges are built of stone, like the new London Bridge and the ends of the Tower Bridge over the River Thames. But railway bridges are, as a rule, built of steel girders, resting on stone pillars.

One of the most famous steel railway





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bridges is the Forth Bridge across the Firth of Forth in Scotland. Another is the Tay Bridge across the firth of this name farther to the north. A third steel railway bridge is that outside Charing Cross Station in London, and another very interesting bridge of steel is that across the River Tyne at Newcastle. The last named is called the Swing Bridge, because it is swung round on its centre to allow the great war vessels to pass down the river from Elswick, where these huge ships are built. (See page 131.)

I should, however, fill several pages of this book if I were merely to mention the most interesting bridges in our own country. Our ironworks at places like Middlesbrough are famous for their steel bridges, and they are made in this town for other countries as well.

You may wonder for a moment how a great bridge can be sent out of the country, but a little thought will show you that it can be made in parts and packed in a ship. Our bridge-builders have made bridges for India



THE TUBULAR AND SUSPENSION BRIDGES OVER THE MENAI STRAITS.

and South Africa and Canada and New Zealand; and more and more of these great structures are needed every year.

Bridges are built to cross rivers, lakes, canals, roads, valleys, and gorges, and some of them carry water which forms part of a canal. In this way it is even possible to carry one canal over another.

A little thought will show you that quite a small army of men will be required to set up a bridge. Perhaps you can name some of the trades which would be employed in work of this kind.

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Steel girders are put to another interesting use. They are used to make the framework of a building, and surrounded by concrete. This makes walls of very great strength, which are cheaper than those built of stone.

### 6. OUR SPINNERS AND WEAVERS

Many boys and girls in the north of England find employment in the woollen mills of Yorkshire and the cotton mills of Lancashire. We say that they are engaged in the "textile" trades, although, strictly speaking, this word means "weaving"; and spinning must be done in the mills before the cotton thread or woollen yarn is ready for the weaver.

You already know where our cotton towns are situated, and you know where the cotton crop comes from. You also know that there is something in the moist air of Lancashire which makes this part of the country specially suitable for the spinning of cotton thread and the weaving of cotton cloth.





IN A COTTON-SPINNING MILL.

The cotton comes to Lancashire in tightly-packed bales bound with iron hoops. The wool must then be broken up, cleaned, carded (that is, have its fibres straightened out), drawn into long threads, twisted, and spun into fine thread suitable for weaving into cotton cloth.

All this is done by the use of the most clever machines which are almost human, and only need "minding" by the workers in the factory.

The spinning rooms are filled with the

hum of thousands of spindles, and the workers are not able to make their voices heard ; but most of them have learnt a kind

of lip language, so that they can talk to each other across the shed without speaking a word.

In the weaving shed the looms are set in rows close together, with just enough room for one person to pass round

between them. The machines in the mill are now so cleverly made that the visitor feels that spinning and weaving are really matters for the engineer. The spindles, rollers, and wheels seem to do the work with very little human help, but for all that there are very many people busily employed in the mills of the North.

The spinning and weaving machines used



LEAVES, FLOWER, AND FRUIT OF  
COTTON PLANT.

in linen and woollen mills are in some ways similar to those used in the cotton mill. The woollen thread or "yarn" is dyed of different colours before it is woven into cloth. If you look at some woollen cloth very closely, you will find that it is often made up of yarns of different colours.

At present I am wearing a "navy blue" suit, but when I look closely into the cloth I find a thin green thread and another red one crossing the cloth here and there.

The first weavers came to us from Flanders or Belgium hundreds of years ago, and settled in the east of England. They taught the people there how to weave, and the knowledge soon spread to other parts of the country, and especially to Yorkshire, where there were such fine broad pastures for sheep and plenty of wool.

I could tell you many interesting stories about the making of the first machines that were used in the cotton and woollen industry, but I have space only for two; and, strictly



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speaking, they belong not to geography, but to history.

A certain inventor puzzled his brain for a long time to find out how to make a machine which would comb wool. One day he sat idly watching his daughter combing her long black hair before the mirror. "Why, that is just the way to do it!" he said to himself; and he set to work to make a machine which would move exactly as the girl's hands had moved before the mirror.

Another story tells that an inventor got the idea for the stocking loom from watching his wife using her knitting needles. This reminds us that a great deal of our wool is made into yarn for stockings; and the making of these useful articles gives employment to a large number of girls and women, especially in and about Leicester and Nottingham.



ENGLISH FARM LANDS.

## 7. PEOPLE WHO GROW THINGS

Even the farmer far away from smoky towns is concerned in the coal and iron-ore which are found in our country ; for in these days he cannot go far in his work without using machines made of steel.

He needs steel ploughs, harrows, machines for sowing the seed, and those cleverly-made machines which are called "reapers and

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binders," because they not only cut the corn, but bind it into bundles as well.

Many machines of this kind are made at the city of Ipswich in the south-east of England. If you look out this place on the map, you will find that it is not far from the English wheat lands of which you read in an early chapter of this book.

Farming is becoming more and more a matter of machinery, and even in the harvest time the farmer needs very few "hands" or workers, compared with the number that once found employment on the farms. But even in these days of machinery, one out of every fifteen workers in the country finds work on the land.

Of course all these workers are not employed in the task of raising wheat, barley, and oats. Many of them are at work on the dairy farms and in the making of butter and cheese, in tending sheep and cattle, and in the nursery gardens in all parts of the country.



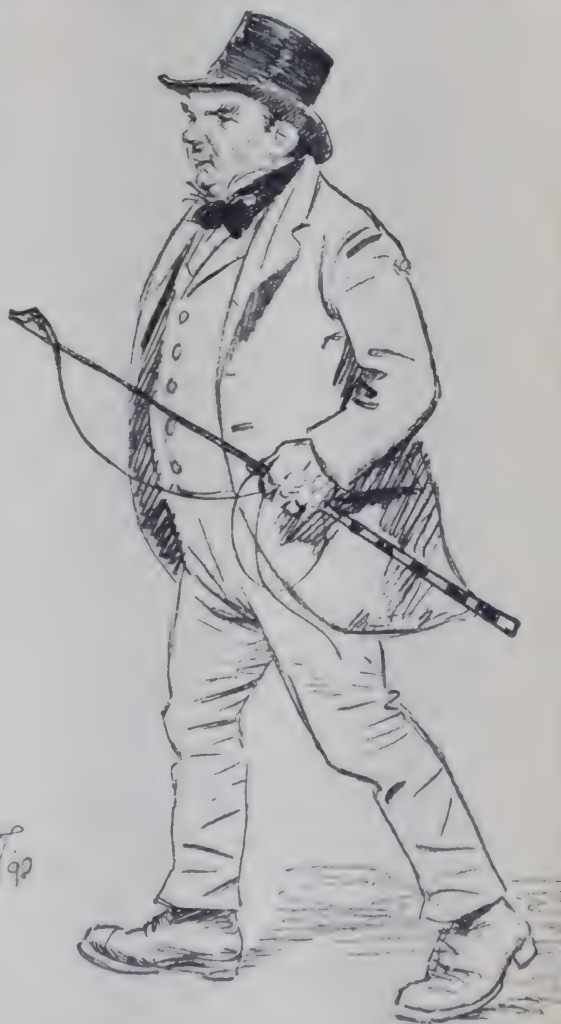
Our farming methods are becoming better and better as time goes on ; and this is a very good thing, for there are wide lands in other parts of the British Empire where there are good chances for young farmers who have learnt all they can in the old country.

Many bright

*J. J.*

young people are quite aware of the chances offered by modern farming, and they are learning all they can about this healthy, open-air occupation. They find out all that is known about the different kinds of soil, and the kind of crops which can be most easily raised upon them.

They study manures and their effect upon



THE IRISH CATTLE-DROVER.

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the soil. They learn all about the various machines used in farm work, and they study prices and methods of sending farm produce across the country. Most of all they turn a deaf ear to the grumbling, old-fashioned farmer who says that there is "nothing in farming"; for they know that people will always want food, and that a good living can always be made by those who are ready to supply it.

People may now and then do without a new dress or a new hat; but they cannot do without a new loaf every morning, or make the old rashers of bacon serve over again when once they have been eaten.

So, if you have a little garden, try to make it grow something eatable; for there is too much waste land in our little country.

There are workers of many different kinds of whose work I have said nothing, for I have space to deal only with some of the chief industries in the country. I should

like to tell you something about the interesting work done by potters, match makers, soap-makers, motor-car builders, glass-makers, gun-makers, cycle-makers, pen-makers, and rope manufacturers; for all these workers are doing very important work for our people.

But, as I have said, I have no space to deal with them. Perhaps you know something about some of these trades yourselves.



POTTERS AT WORK IN A STAFFORDSHIRE FACTORY.



## SIXTH SECTION—TRANSPORT

## I. OUR RAILWAYS

IN what are sometimes called "the good old times" most people stayed in one place. They spent their lives in their own town or village, and died there. But that is not our way of living at the present time.

Most people are continually moving about from place to place. In London, where I live, the people seem to exist in trains, "tubes," trams, buses, taxi-cabs, and motor cars. Everything goes by wheels, but petrol and rubber tyres are making the horse old-fashioned.

It may seem very foolish, but it is part of the life we live to-day, and we really cannot make a better of it; in fact, we feel that any up-to-date town, city, or country *must* provide cheap and rapid means of getting about. Some of us who live in towns and cities have almost forgotten how to walk; and if we find ourselves in a



THE PICCADILLY CAB-STAND—OLD STYLE.

village four miles from a station, we think we are at the “other side of Nowhere.”

The chief means of getting about from town to town is, of course, the railway; and you will be glad to learn that there is no

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country in the world which has better railway tracks or better rolling-stock than the British Isles. Of course our country is the home of the railway, and we ought to know a great deal about rails and engines.

The main lines in Great Britain start from London, which has a ring of large railway stations or *termini* round about it. We must therefore begin at the Mother City if we wish to study the railways of our country; but it will help you if we first take a glance at a physical map of Great Britain.

Railway engineers like the level lands best of all, for they present the fewest difficulties for their work. They seek out the plains, the valleys, and the gaps between the hills; for the cutting of a great tunnel is a very difficult and expensive piece of work.

You will be fairly safe if you put your finger on each of the great upland districts in turn and say, "There will not be many railways to be found here." Of course the north-east towns and the north-west towns



must be connected, and this is done for the most part by piercing the great range of the Pennines by means of tunnels. There are more tunnels in the Pennine District than in any other part of the country.

Your physical map will show you that it is not a very difficult run out of London, north, east, south, or west; and there is a very nice level path from London to Edinburgh, and from thence to Glasgow. But let us learn a little about some of the great "main" lines which have a terminus in London.

If we wish to go from London to Edinburgh by the east coast, we travel from King's Cross Station in a Great Northern train. But at Doncaster we leave the metals of the Great Northern Company, and the next part of our journey is over the North-Eastern system as far as to Berwick. Here we leave the lines of this company and run over the North British metals to Edinburgh.

On this journey we have not passed through very many large towns when we

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consider that we have run over about 400 miles; for we have been passing through or near some of the chief farm lands in the country. As a rule, however, the express stops at the cathedral city of Peterborough, famous for its brick-works; at the busy city of York; at Darlington and Newcastle-on-Tyne; and at the Border town of Berwick.

We might have gone to Scotland from Euston Station by the London and North-Western Railway. As the name of this railway will tell you, this main line runs in a north-westerly direction to the border city of Carlisle. But your physical map will show you that this is not such a level journey as that by the east coast.

The train must climb Shap Summit between the Pennines and the mountains of the Lake District, and at one point it runs at a good height above sea-level. It goes at a swift speed down the other side of this hill, usually with steam cut off; indeed

the speed is more swift than comfortable for some travellers. But the sight of the moorland and mountain scenery of this part of the journey is worth a thrill or two.

After reaching Carlisle, the traveller may go north-west to Glasgow or north-east to Edinburgh. If he takes the latter way, he goes by what is called the Waverley route, through some of the prettiest scenery in the whole of the British Islands.

There is still another main line between London and Carlisle, that of the Midland Railway, which starts from St. Pancras in London. On this journey the traveller sometimes passes through Sheffield and Leeds; and after leaving the latter city, he runs through very fine open moorland scenery until he gets to Carlisle.

We have now traced the three great routes which connect the two largest cities of Scotland with the capital of England. There is a great deal of business done between these places; and it is most important that any





big city should have quick and easy connection with London, the Mother City.

You will find it a very useful exercise to work out the distance of your own home from London and the quickest means of getting there. The single third-class railway fare reduced to pence and then divided by three and multiplied by two will give you the number of miles.

Travellers who wish to go from London to the capital of Ireland must start from Euston on the North-Western Railway. They travel through the busy railway town of Crewe, across the Menai Straits to Holyhead, and then take the boat to cross the Irish Sea.

## 2. MORE ABOUT OUR RAILWAYS

I was sitting at breakfast in my home in London when the morning post brought me a letter asking me to come to Bristol as quickly as possible.

This meant a journey on the "tube" train to Paddington Station, where I could catch the Bristol express which runs on the Great

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Western Railway. A glance at the railway guide, however, showed me that I could eat my breakfast in comfort; for the best train in the morning did not leave until eleven, and reached Bristol at one o'clock.

So you see that the city of Bristol is within very easy reach of the capital. The route between the two cities is a rather interesting one and very easy running, for the way is quite level, as you can see from a physical map.

We pass near the royal palace of Windsor and through the "biscuit town" of Reading. Then we run on to Swindon, where the trains of this railway company are built, and then to Bath, where you can get all kinds of baths if you have rheumatism or anything else unpleasant of that kind, and then be taken about in a "bath" chair. Bath is, as it surely ought to be, one of the cleanest cities in the world.

On we go to the busy port of Bristol. I transact my business, and while lunching





BATH. WEST FRONT OF THE ABBEY, AND "BATH" CHAIRS.

receive a telegram telling me to go on to Cardiff in South Wales. The waiter brings the railway guide, and I find that I can get

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to the Welsh city by a quick train which does the journey in about an hour, passing through the Severn Tunnel, which has been cut under the Severn mouth, and is the longest railway tunnel in the country.

On I go to Cardiff, another busy, bustling city, and having made my call, find that I can get back to London by a quick train, which reaches Paddington about half-past ten. It has been a busy, rushing day, but I have at least proved that the great towns of the west are within easy reach of London.

If we wish to go to the Continent from London, and to have a short sea journey, we have a choice of several routes. The quickest of all is that of the South-Eastern and Chatham Railway, which runs to Dover from Victoria or Charing Cross Station.

The quick "boat train" takes about an hour and a half to get to Dover, and the sea passage to Calais takes a little over an hour. Or we may go to Folkestone on the south coast and cross to the old French town

of Boulogne, where Napoleon waited to invade England about a hundred years ago.

The soldiers' and sailors' railway is the London and South-Western, and the London station of this line is Waterloo, which is named after the great battle, and therefore ought to be easy to remember.

I call this line the soldiers' and sailors' line for two reasons. It carries passengers to the great naval town of Portsmouth. It has carried many a troop of soldiers to Southampton for foreign service. And it takes soldiers down to the great military camp on Salisbury Plain.

It will also take you farther still if you are only a tired civilian needing a holiday; down into the beautiful country of Devon and Cornwall, of which I shall tell you more in a later chapter.

You may perhaps think that tables are rather uninteresting things, but with a map before you it is quite possible to get some fun out of the following :



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Birmingham—Leave Euston, per L. & N.W.R.,  
113 miles. Time, 2 h. 5 m.

Manchester—Leave Euston, 183 miles. Time,  
3 h. 35 m.

Liverpool—Leave Euston, 201 miles. Time, 3 h. 50 m.

Sheffield—Leave St. Pancras, per M.R., 158 miles.  
Time, 3 h. 25 m.

Nottingham—Leave St. Pancras, 124 miles. Time,  
2 h. 54 m.

Leicester—Leave St. Pancras, 99 miles. Time,  
1 h. 45 m.

Oxford—Leave Paddington, per G.W.R., 64 miles.  
Time, 1 h. 25 m.

Cambridge—Leave Liverpool Street, per G.E.R.,  
56 miles. Time, 1 h. 18 m.

Harwich—Leave Liverpool Street, 71 miles. Time,  
2 h. 5 m.

Of course every one is not spending time in running up to London or away from that great city; but this table will remind you that you can play a good game of imaginary journeys on a wet day or a winter evening with a railway guide and a map.

The station or stations of your own town ought to be of real interest to you. I

know one boy who has learnt nearly all the geography he knows from the posters and maps of York station. But then, of course, York is a specially good place, as it is one of our busiest railway junctions.

You can always count upon seeing the engines of five or six different railway companies in this great station ; and this reminds me that it is a very good and useful hobby to collect coloured post cards showing the engines and carriages which run on the metals of the different companies.

I have not told you all that there is to learn about the chief railway lines, because I do not wish to confuse you. The best method is for you to begin with your own railway, and connect it with a main line between two big towns, if you happen to be on a branch line.

Most of the trains that you see on the railways are driven by means of coal ; but there are signs that this is not going to be the method of the future. Several com-

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panies have electric trains running over short distances; and the Great Eastern Railway runs some trains with oil or liquid fuel.

For the present, however, liquid fuel is more expensive than coal, but there is no doubt that it will come into more or less general use; and arrangements are being made to store oil in this country in very large quantities, for it will be used for ships as well.

For example, a huge depot has been planned on the bank of the Humber, about 21 miles from Spurn Point. Here petroleum, petrol, kerosene, and other oils will be kept in large tanks; and it is to be hoped that careful arrangements will be made for protecting the oil depot in case of war, for it might be one of the first places to be attacked.



### 3. TRAMS, "TUBES," MOTORS, AND AEROPLANES

There are very few of our larger towns which are not provided with electric trams. These trams not only carry people from one part of the town to another, but, as a rule, take them right out of the town into the open country. This means that many people can now afford to live in the fresh country air, and at a good distance from their work. They can thus keep a garden, and live a much more healthy life.

The motor bus is even better than the electric tram, for it can go farther, and often at a cheaper rate. It is much more pleasant to go out of town on a motor bus, especially in the summer, than to travel in a stuffy train. In time, all our large towns and some of our smaller places will be joined up by these useful omnibuses.

The small motor car and the motor bicycle are also opening up the country, and taking

people out of the crowded towns. So we find more and more people interested in what can be grown in the soil; and this is really the most important thing in any country.

We have not yet begun to take excursions by aeroplane, though it will possibly not be long before we are doing this. The war with Germany showed how very useful the flying machines could be made; and there is no doubt that they will prove just as useful for many purposes in times of peace.

Motor cars, motor bicycles, motor buses, taxi-cabs, and aeroplanes are driven by means of petrol; and it is important that any modern country should be able to get a good and cheap supply of this spirit. It cannot be got from our own country, for the petroleum wells are found in lands across the sea.

We are therefore obliged to import this useful spirit. It is sent to us from Russia, the United States of America, and Mexico in North America. We have also had some from Canada, and it would be well if we

could get more from other parts of the British Empire; for, as I have said again and again, the next best thing to supplying some useful thing ourselves is to be able to get it from some other part of the King's dominions.

#### 4. OUR CARRYING TRADE

A very large number of the ships upon the seas belong to our country. Some of them are large liners like floating palaces; some are coasting steamers of smaller size; while others are wooden vessels of various sizes, and very strong and sturdy.

These ships do not all ply between foreign ports and our own country. Many of them carry goods from one foreign port to another, and some of them pass between different parts of the British Empire. The ships of Britain are found in every sea. About one-third of them are sailing vessels, while the rest are steamships.



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You have already noted the names of several of our largest ports, of which London is by far the busiest. Into the mouth of the Thames come ships from every part of the globe, and, as you might expect, London is especially the port at which cargoes are landed from the other side of the North Sea.

Here, also, come the ships from India with tea and rice and jute, as well as the wool and meat ships from Australia and New Zealand, and the tea ships from China.

Our next largest port is Liverpool, and, as you might expect from its position, the trade of this busy port is chiefly with America. Here is landed the wheat from Canada, as well as the flour and meat from the United States. The latter country also sends to Liverpool the raw cotton upon which the living of so many Lancashire people depends. From South America come the fresh meat and the wheat of the Argentine, and the rubber and ivory of Africa are also landed at

Liverpool. The great port of Glasgow also trades chiefly with America, taking in supplies of cotton, timber, meat, and other necessities for Scotland.

Bristol and Cardiff also trade largely with America, while Southampton has a great trade with South Africa, as well as with the lands round the Mediterranean Sea. From the latter countries come our currants, raisins, figs, oranges, and other pleasant things to eat.

But the ships which enter and leave our ports do not only carry eatables and things which we need for our factories. They carry large numbers of passengers, for the British people are great travellers not only for business, but also for pleasure; and the liners on which they travel are like big floating hotels.

Many of the people carried on British liners are emigrants who are going out to make new homes for themselves in other parts of the British Empire.



## SEVENTH SECTION—HOLIDAYS

### I. BY THE SEA

WE have read a great deal in this book about the work done by the people in this country. Now let us learn a little about the way in which the people play and something about their playgrounds. For the better the people of a country play, when the proper time comes the better will they do their work.



At one time people took very few holidays. They preferred to pay doctor's bills, and besides, holidays were very expensive before the time of the railway. In our time, however, railway fares are not very high, and thousands of people make a living by letting lodgings to those who wish to spend a short time in some pleasant holiday spot.

There is now a very large choice of places in which holidays may be spent. Let us take a map and see where some of these places are to be found.

We must note first of all the numerous towns and villages on the sea-coast which draw crowds of visitors every summer.

There is a large number of these places on each of our coasts, and some of them are big, busy towns with streets of shops, trams, hotels, and boarding-houses. But you will not find that a seaside place is very popular unless the bathing is good.

The railway companies do their best to join up the large and busy towns to the sea-



side resorts. They run as many fast trains as possible, so as to help the busy workers to spend their holidays in the healthy seaside air.

The people of the busy towns of Lancashire and Yorkshire find it easiest to get to Scarborough and Whitby and Redcar on the east coast, and to Blackpool, Southport, and Morecambe on the west coast.

Seaside holiday-makers from London

have a wide choice of seaside resorts both on the east and south coast. If they require bracing air they can go to Lowestoft or Margate or Ramsgate on the east coast; and if they wish for warmer places they have a choice of Hastings, Brighton, Eastbourne, Torquay, or Bournemouth on the south coast.

People from Bristol and the busy towns of South Wales can easily reach Ilfracombe in Devon, or the many smaller but very beautiful places on the coast of the Devon and Cornwall peninsula.

Glasgow holiday-makers go to Rothesay or to Oban on the west coast, while Edinburgh people have a choice of health resorts on the coasts round about the Firth of Forth. But many Scottish people come for a summer holiday to the south of England, where it is warmer, and they can lay up a store of heat for the colder northern winter.

Large numbers of holiday-makers from England, Scotland, and Ireland go to the



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coast of the Isle of Man for a summer holiday; and the beautiful Isle of Wight off the south coast also draws many visitors from all parts of the land.

Of course I have named only a few of the largest of the seaside resorts, and I shall not be surprised if I have missed out the town or village in which you are specially interested. In that case you can easily add to the information I have given you, and that will be better than merely reading.

The boys and girls of Newcastle district can easily catch me, for I appear to have forgotten their favourite seaside place; while boys and girls in Welsh schools will want to know why I have missed out a very important Welsh seaside resort on Cardigan Bay. My answer to the Welsh pupils is that their question shows me that there was no need for me to mention this town to such clever scholars; for it is clear that they know its name already.

Of course you all know what are the joys



YARMOUTH BEACH.

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of the seaside—bathing, paddling, sailing toy boats, rowing, building sand-castles, fishing, swimming, concerts on the beach, and many other delights.

There are other things which can be done at the seaside to help to spend a spare morning. A study of the tides with the help of a local tide-table often helps to while away an hour. The character and “lie” of the rocks in the cliffs ought also to be of interest to an intelligent boy or girl.

If the place at which you are staying is a harbour, you will be interested in the shipping; and a few polite questions put to the sailors may teach you a great deal about the places visited by the ships, and about the cargoes which they carry.

Some of these wooden ships in small harbours are very interesting, and you can learn from their captains or seamen a good deal which you would never find in books.



## 2. A COUNTRY HOLIDAY

There are many people who prefer to spend their holidays in the country; and these include, of course, those people whose homes are by the sea.

One of the best holidays of all can be spent on a farm not far from the sea. For when you tire of the seaside you can watch what is going on at the farm; and there are a good many fine farms within easy reach of the sea. I leave you to say in which parts of the country you would expect to find them.

There are certain parts of the British Islands which can be very fitly described as holiday playgrounds. One of the best known of these is the Lake District of Cumberland and Westmorland.

It is not easy for me to tell you what are the charms and delights of this part of the country, although I know it very well. Each lake has its own quiet beauty or stern grandeur, each lofty peak its own shape and



MOUNT HELVELLYN FROM THIRLMERE LAKE.

character. There are some of the most beautiful small waterfalls in the world, and the valleys are green and restful, the air pure and soft and sweet.

The Lake District is one of the rainiest parts of the country, unfortunately for holiday-makers. They forget, however, that if it were not for the action of the water, the scenery would not be half so beautiful or so full of variety.

The two chief centres for tourists are



HARLECH CASTLE AND SNOWDON.

Keswick and Ambleside, one at the north end of the Lake Country, the other at the south. From these two places it is possible to make the most convenient excursions, which will include the best of the scenery in the district. The mountains are not high as mountains go, say in Switzerland, for Scafell, Skiddaw, and Helvellyn are only a little over 3000 feet above sea-level, while Mont Blanc in Switzerland is five times as high.

The highest peak in the Snowdon mountain



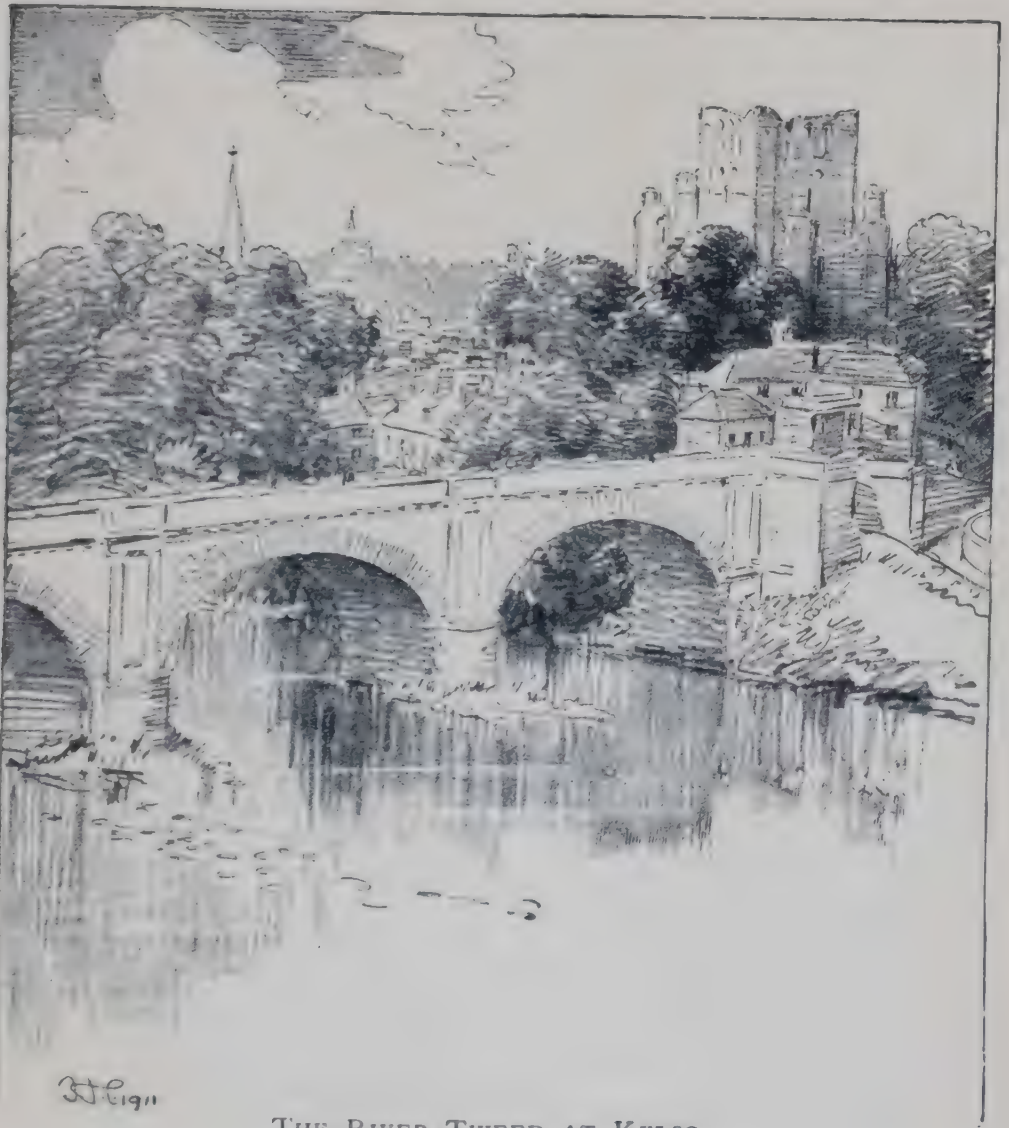
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of North Wales is higher than this,—3560 feet. Here is another playground which is in great favour with those who like the exciting joys of mountain-climbing. For those who prefer to be more comfortable, there is a mountain railway to take them to the summit of Snowdon.

There is a still higher British mountain on which the snow does not melt in summer. It is called Ben Nevis, and there is an observatory on the top where some people think the weather is made! Ben Nevis is right in the very heart of Scotland.

This high mountain is only one of the many “Bens” of Scotland, which has some of the finest mountain and lake and coast scenery in the world. (The English “lake” is a “loch” to the Scotsman and a “lough” to the Irishman.)

The towns of Oban and Inverness are the chief tourist centres of this part of the British Isles, and are always crowded in the summer-time. Some of the finest scenery



THE RIVER TWEED AT KELSO.

can be seen by taking a steamer trip through the Caledonian Canal, which runs in a northeasterly direction right across Scotland.

For those holiday-makers who like quiet hill scenery and beautiful river valleys, the central part of Southern Scotland is one of

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the best playgrounds. The most convenient centre is the little town of Melrose, which is not far from the home of Sir Walter Scott and near to some of the most beautiful abbey ruins in the country.

For a tramping holiday I can recommend the moors of Yorkshire, or the Peak District of Derbyshire; while for river scenery the Wye Valley in Wales is known all over the world. I have already drawn your attention to the Cornwall and Devon Peninsula as a playground, and I sincerely hope that some day you will thank this little book of mine for telling you how beautiful it is.

I should be much pleased if I thought that this would happen.

If we cross to Ireland we shall find many holiday districts of the greatest beauty. Here we are in the so-called Emerald Isle, and its greenness is, of course, due to the heavy rains of the country, which are not always welcome to the tourist.

Ireland has its own Lake District, and it



is one of surpassing beauty. It lies in the south-west corner, and includes the famous Lakes of Killarney. This is how a poet says that it calls to town-tied people:

“ I will arise and go now, for always, night  
and day,  
I hear lake water lapping with low sounds  
by the shore ;  
When I stand on the roadway or on the  
pavement gray,  
I hear it in the deep heart's core.”

I think I have told you enough to show you that we have holiday districts in our own country to suit all tastes. I recommend you, when you grow up, to sample them before you go for holidays abroad.

I fully expect that I have missed out the holiday district in which some of my readers are most interested ; but I do not wish to make this chapter a mere catalogue of names, nor do I wish to overwork that useful word “beautiful.” I only want to set you talking to your teacher about this matter.

## EIGHTH SECTION—PROTECTION

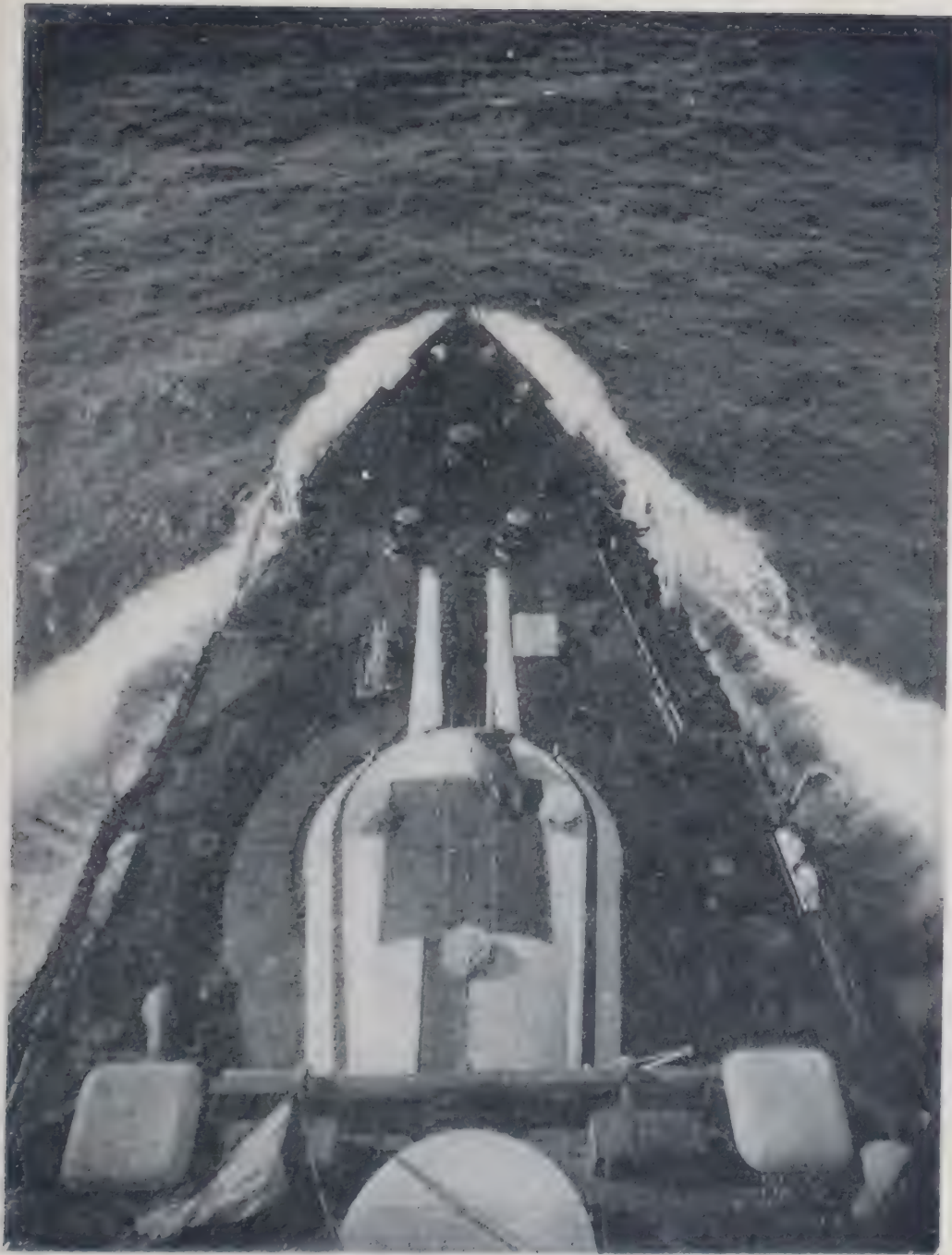
## I. OUR FIRST LINE OF DEFENCE

IN reading about our supplies of food, cotton, wool, tea, and other necessities, we saw what a great deal depended upon our Navy. Again and again we agreed that it would be a very bad thing for us if the Navy were not kept as strong as possible.

We live in a group of islands ; and though the sea is truly a bulwark against foreign enemies, we must have many ships ready to engage a foe that tried to land on our shores.

But the Navy has other work to do besides this. A portion of it must be ready to protect the food-ships which come to us from far across the ocean. In time of war other fighting-vessels must protect troopships which carry our soldiers across the sea.

Others again must search out the enemy's trading-ships and capture them if they can ; while some must go to the enemy's ports and naval bases and do all the harm they can to



THE ENEMY IN SIGHT—"FULL SPEED AHEAD!"

Looking down, on board a battleship, from the forward fighting top



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them, in order to bring the unhappy war-time to an end as quickly as possible.

And above all the largest and newest of our battleships must keep together in a strong fleet, in order to engage the enemy's main fleet as soon as a meeting can be brought about.

You see then what important and heavy work the Navy has to do in time of war. This is not only because we live in an island, but because we have a large empire made up of lands scattered all over the face of the globe.

Even in peace-time the Navy is very busy. The men must keep themselves fit and practise their firing and other work; for they never know when or where war may break out.

New ships are always being built, for it is not long before one kind gets out of date and has to be replaced by another. Clever men in other navies as well as in our own are continually inventing some new thing, and it

would be foolish if we were to fall behind in the game; our very life depends upon keeping up to date.

So we keep a large fleet of steel ships of the very latest pattern. Some of these are huge battleships with heavy guns. Others are smaller but swifter, and are known as cruisers. Then there are torpedo boats, which are smaller still, and which send out the deadly torpedoes, that are meant to pierce the side of the enemy's ship and sink it if possible.

We have also a large number of small swift vessels which can be moved under the water, and are known as submarines. These are really small torpedo boats, as they send out torpedoes when they get near enough to the foe.

The Navy also has a number of flying-machines known as sea-planes, as well as special ships for launching them. These air-craft are very useful for flying over the enemy's fleet or naval bases, and finding out

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what is being done. They have also been used to drop bombs on hostile ships.

Besides all these we have a number of vessels known as mine-layers, which place the deadly mines in the sea with the object of blowing up the enemy's ships. But this is not the bravest method of sea fighting. Another kind of fighting-ship is the monitor, which can be taken into very shallow water to fire guns at the land forces of the enemy when they come near to the coast.

I need scarcely tell you that even in peacetime we spend a great deal of money upon our Navy. The amount comes to about a pound a year for each person in the country, in ordinary times, and when you look at it in this way it does not seem a great deal to pay for safety after all.

The men of our Navy are some of the bravest and cheeriest men in the world. Most of them come from the counties of Devon, Dorset, Hampshire, Kent, and the east coast towns of England and Scotland.





TRAINING SHIPS, DARTMOUTH.

If you look at the map you will see that the above are all "coast-wise" counties.

The warships are built in the yards on the Tyne, Wear, Tees, and Clyde, as well as at Belfast. These are all private yards, but there are some ships built at what are known as the Royal Dockyards.

These are at Portsmouth, Plymouth, Sheerness, Chatham, and Pembroke, while Rosyth on the Firth of Forth is to be added to their number.

At each of the Royal Dockyards there are covered slips on which ships are built, docks in which they can be kept or repaired, and all the appliances for rigging them out for sea. The food for the sailors and the things needful for the working of the ships are put on board at Plymouth, Gosport, and Deptford.

Now while our ships are sailing the wide ocean far away from home, they must have places of call where coal and food can be obtained. They may also be in need of repair, especially if they have been in action.

So we have in all parts of the world what are called "naval depots," where there are big docks and workmen ready to do repairs, as well as supplies of food and shells and other material.

The chief of these stations can be easily found on a map of the world with the help of your teacher. They are Gibraltar, Malta, Halifax, Bermuda, Jamaica, the Cape of Good Hope, Ascension, Trincomalee, Esquimalt, Sydney, and Hong-Kong.

## 2. OUR SECOND LINE OF DEFENCE

Our second line of defence is the Army. It has a double duty. It must be able to defend our homes, and be ready to fight for us in any part of the world to which it may be called.

Each of these duties is very important, but we might say with perfect truth that the defence of our own islands comes first of all. Let us see what is expected of the Army in



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time of war when an attack upon our own coasts may be made.

It must provide men for the garrisons of fortified places like the mouth of the Thames, Portsmouth, and the Isle of Wight. It must keep a strict watch upon the coast so as to be instantly aware of any attempt at landing troops. It must provide small forces easily moved about, to get into touch with any body of the enemy that may succeed in making a landing.

It must also provide a large central force to engage the enemy's army, which has in the meantime been kept in check and worried by the smaller forces which are easily moved about.

The Home Army, however, does not profess to be able to prevent any possible landing on our shores; and you must not think of a large body of soldiers standing always with fixed bayonets right round our coasts.

We look first to the Navy to deal with any ships bringing men to our coasts; but if in a

fog these ships evaded the Navy or if our main fleet were first beaten, the enemy might be able to land on our shore in some quiet place without having to fight with our soldiers on the beach.

But as soon as news was received of the landing, the small forces of which I have spoken would begin their work; and the Royal Air Force would soon be very busy.

The officers and men of an army of to-day need a great deal of training; and our chief training town is Aldershot in Surrey, where there are drill grounds for the men and military colleges for officers of all kinds. A great deal of Army training work is also done on Salisbury plain in Wiltshire.

Other Army towns are Chatham in Kent, near to the mouth of the Thames, York, Edinburgh, Dublin, Plymouth, and Portsmouth, while there are barracks for soldiers in many other parts of the country. Perhaps you know something about the barracks nearest to your own home and about the

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regiment that is quartered there at the  
present moment.



THE HORSE GUARDS, LONDON.

The chief office of the British Army is in London. Here the officers meet to arrange plans; and from this "War Office" orders



are sent to the various sections of the Army both at home and abroad.

As British people we are, of course, specially interested in the Army being kept up to date. It ought to have the best possible training, and the latest weapons and appliances of every kind.

When the war with Germany broke out in 1914 our Army was found to be in a very good state of preparation, and the men proved to be splendid as soon as the fighting began. The flying corps had not, of course, had any experience of real war; but as soon as they got to work, they proved themselves a very valuable part of the British fighting force. The naval airmen, also, did splendid work.

## NINTH SECTION—GOVERNMENT

### I. THE HOUSES OF PARLIAMENT

ONE of the most important groups of buildings in the country is formed by the Houses of Parliament, in that part of London which

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is known as Westminster. The Houses of Parliament stand quite close to the great church known as Westminster Abbey, where many of our kings and great men are buried.

In the Houses of Parliament the laws are made for the nation. Members are sent to the House of Commons for the towns and cities and counties according to the number of people in them. For example, a small town may send one member, and a large town two or three or even four. Those places which are not large enough to have their own member share a member with other places. So you see that geography has a great deal to do with this matter also.

Now you ought to be asking yourselves about the member who "represents" you in the House of Commons. Your teacher will be able to tell you about him, and you may learn a great deal of geography while you are finding out about this matter. You may find that you are living in one of those large towns which are known as "county boroughs."

There are a lot of fine buildings not far from the Houses of Parliament which are known as Government Offices. One of these is the War Office, which looks after the Army; another is the Colonial Office, which has charge of certain affairs in those lands across the sea where other British people live.

Another is the office of the Board of Education, which looks after the schools of England. Not far away is the Scottish Education Office, but the Irish Education Office is in Dublin, the capital of Ireland.

Then there is the great office known as the Admiralty, which looks after the Navy. As you might expect, this is a very large office, for we have by far the largest Navy in the whole world. On the roof of the Admiralty are the wireless installations by which messages can be sent to the ships at sea.

This is how *Punch* speaks of the "wireless" at the Admiralty :

There sits a little demon  
Above the Admiralty,



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To take the news of seamen  
    Seafaring on the sea ;  
So all the folk aboard ships  
    Five hundred miles away  
Can pitch it to their Lordships  
    At any time of day.

The cruisers prowl observant ;  
    Their crackling whispers go ;  
The demon says, ' Your servant,'  
    And lets their Lordships know ;  
A fog's come down off Flanders ?  
    A something showed off Wick ?  
The captains and commanders  
    Can speak their Lordships quick.

A walk from the Admiralty, along an avenue of trees known as The Mall, brings us to Buckingham Palace, where the King lives, who is of course the head of the country and of its Government. When the King is in residence in the palace, the Royal Standard is hoisted on the flagstaff.

Perhaps you know what appears on the Royal Standard. It is the personal flag of the King, and no one else has the right to hoist it. The flag of the country is the Union

Flag, which of course you have often hoisted ; but do not forget that it should be furled at sunset ; in other words, the sun should not be allowed to set upon it.

## 2. OUR COUNTY COUNCILS

You already know something about the counties into which our country is divided. Each of these counties has what is known as a county town. And at this town the County Council meets.

More than half of the county towns bear the same name as the county in which they are situated. The others have names which are quite different from the names of the counties. Thus the county town of Lincoln is Lincoln, but that of Kent is Maidstone.

I am not going to burden you with all the names ; but I hope that you will try to find out for yourselves the name of your own county town and the names of the counties nearest to your own.

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In the early days the county town was really the largest and most important town in the county. But this is not often the case at the present day. Other towns have grown up which have overshadowed the county towns in many cases; but still the old historic town keeps its position as the seat of county or "local" government.

You may reasonably ask why there is any need for county government when there are so many Government offices in London. Well, you see, there are certain matters which can be much better managed by each county for itself. The Parliament in London has quite plenty to do to look after the nation and the Empire as a whole.

Besides, it is important that people should become used to managing their own local affairs, as this keeps up a healthy citizen's interest.

The county boroughs, of which I have already spoken, have councils for themselves and do not come under the county council.



Many of the county towns are also cathedral cities ; for in the old days the bishop of the cathedral used to help to govern the county from the county town.

## MY COUNTRY AND MYSELF

We have been considering what our country has to offer us, and we must acknowledge that it is the best country of the world in which to live. Now let us consider for a few moments what we owe to our country in return for what she gives to us.

We owe her service, and when she needs it must be ready to rally to her call. We have an Army and Navy, and both are the best of their kind ; but times may arise when the country needs more men ; and then the question for each lover of his native land is, " How can I help ? "

Meanwhile the best way to get ready to respond to this summons when it comes is to keep yourself as fit as possible. This call to

war is the greatest call, which has not often been sounded in our history ; but if it comes in your time you will answer it more usefully if you have trained your body for hard service.

But our country has need of our service in time of peace as well as in time of war. What can we do for her when all is quiet and secure ?

We can take full advantage of what is so freely offered to us in the way of education. We can do our best at school and college to make ourselves as fit as possible for doing useful work when we go out into the world of business ; for no country can now hold up its head, to say nothing of taking a foremost place in the world, unless its people are well educated.

When we begin our chosen work we shall be serving our country in the best possible way if we follow the old command, " Whatsoever thy hand findeth to do, do it with thy might." We ought not to do this merely that

we may "get on"; for our good and careful work is a matter which concerns the whole country.

For a long time British goods have had the reputation of being among the best in the world, although they may not be among the cheapest. We ought to be very jealous of this fine character, and make up our minds to do all we can to uphold it. In this way we shall do our country a real and lasting service.

It is also due to our native land that we should get to know her as well as we can. Many people, and grown-up people too, know very little about their own land, though they may know a great deal about foreign countries.

But the Boy Scouts are finding out what a very interesting place the home-land really is. You can follow their methods although you may not wish to join them. When they grow up they will make all the better British men if they have closely studied their own country.



They will also wish to take a share in the management of their own town or district; and this kind of service is one of the things we owe to our mother-land. We ought all to take an interest in what is going on round about us, as well as in the work of the Town or Borough or County Council, and in the law-making of the Parliament in London.

The Navy and Army, too, are *your* navy and army, and whatever concerns them ought to be of interest to you; for you will help to pay for them as soon as you get a home of your own, and begin to pay rates and taxes.

These are a few of the services that our native country requires of us in return for what she gives us with no unsparing hand.

THE END



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